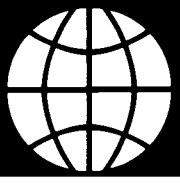

Economic Development Institute
of The World Bank

Toward the Rural-Based Development of Commerce and Industry

Selected Experiences from East Asia

Edited by
Yujiro Hayami

EDI LEARNING RESOURCES SERIES

EDI Learning Resources Series

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The World Bank
Washington, D. C.

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Foreword

As part of its mission to help share the experiences of economic growth among countries and regions, the World Bank's Economic Development Institute administers the Program for the Study of the Japanese Development Management Experience, financed by the Human Resources Development Trust Fund established at the World Bank by the Government of Japan.

This program, which sponsors important research on East Asia's development experience, has published four books on topics ranging from corporate governance to the role of the civil service in economic development. The program was managed from its inception in 1989 by the late Hyung-Ki Kim, whose vision and intellectual leadership were instrumental in shaping the program and its products. Before joining the Bank, Hyung-Ki had a distinguished career in public service and held several senior positions in the Korean government, including vice minister of education.

Hyung-Ki was highly respected by his colleagues for his breadth of knowledge and intellectual integrity. This book and the other titles published to date are part of his legacy to the field of international development.

Vinod Thomas, Director
Economic Development Institute

Preface

The explosive growth of developing economies, although it has been decelerating since the 1970s, has translated into a high growth rate of the labor force. Because this growth has far outpaced the increases in land available for cultivation, the rural sector has experienced increasing incidences of landlessness and fragmentation of landholdings, which has pushed dispossessed rural people into urban slums. To cope with this problem, maximum effort must be expended to increase the demand for labor in rural areas. Agriculture and small- and medium-scale industries are two obvious areas to investigate for possible expansion of work opportunities. In agriculture, the so-called Green Revolution technology that has contributed greatly to increased food production and farm employment in Asia is not considered sufficient to solve the problem. The second option must be explored.

For rural industries to develop to be of more than local significance, it is necessary to establish marketing channels that connect the production of small, scattered enterprises in rural areas with the large urban and foreign sources of demand. In developing economies, however, markets are insufficiently developed to serve this purpose. Some form(s) of personal contract mechanisms are required as a substitute for impersonal markets in order to save transaction costs and to reduce risks amid severe information imperfection and market segmentation.

The purpose of this study is to investigate the production and trade contracts now being tried at the grass-roots level in support of rural-based industrialization. The points of reference in this investigation are historical explorations of the early stage of industrialization in Japan and field surveys of current developments in East Asia. Special attention is given to the conditions that allow the *relational contracting* system to become the dominant production organization over a vertically integrated system. The term *relational contracting* is used here to encompass the long-term, continuous contract relationships between small,

rural-based manufacturers and traders or agents of large, urban-based firms, as well as similar contracts between rural-based manufacturers and their workers, which are enforced and maintained primarily by personal ties and community obligations. This contract mechanism is vital—it is the channel that conveys the demands of large markets, both foreign and domestic, to the small, isolated manufacturers in rural areas that would otherwise be subject to severe imperfections of market information.

The absence of formal documents and official data on organizations and the practices of informal economic agents, such as cottage manufacturers and petty traders, made it necessary to rely on intensive case studies for both the historical and the field investigations. Because of the ephemeral nature of the production and trade contracts of small- and medium-size enterprises in developing economies, as well as the presence of sensitive issues such as taxation and labor codes, the investigation relies largely on personal observations and informal conversations with entrepreneurs rather than formal questionnaires. To verify the responses of a given entrepreneur, efforts were made to cross-check the information with the contracting parties, and repeated visits were needed until consistent answers could be established. The time-consuming nature of such an investigation limited the number of cases that could be included in the study. The approach came to resemble that of anthropologists and sociologists, although the theoretical framework is based on standard economics.

The nature of this intensive, but small-scale, investigation yielded results that are more illustrative (sometimes even anecdotal) than analytical. Nevertheless, the findings clearly demonstrate that rural people in developing areas of Asia possess sufficient entrepreneurship—if they are not held back by undue regulation, taxation, and macroeconomic instability—to organize a network of relational contracts that link their production activities with reservoirs of national and international demand.

Although we recognize the limitations of this approach, the illustrative examples collected in the case studies can provide the basis for the development of hypotheses that can be further investigated in larger, more analytical research studies in the future. Such continuing work would clarify the vital role of rural-based development of commerce and industry in the alleviation of poverty and inequality in developing economies.

The authors gratefully acknowledge the contributions to this volume of the helpful comments and discussions during the planning and interim workshops for this study. We thank, in particular, Masahiko Aoki (Stanford University), Gershon Feder (World Bank), J. C. R. Geaun (National Taiwan University), An-Pang Kao (National Chengshi University), Masahiro Okuno-Fujiwara (University of Tokyo), Jean-Philippe Platteau (University of Namur), and Alberto Valdes (World Bank). We were very fortunate to have excellent support from John Didier and Latifah Alsegaf of the World Bank.

On behalf of the authors, I would like to express our deep grief on the passing of Hyung-Ki Kim, who initiated this project and guided us with his broad perspective and solid judgment to the end of his life. This book is dedicated to his soul.

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Abbreviations and Acronyms

AFDC	Agriculture and Fisheries Development Corporation
ASEAN	Association of Southeast Asian Nations
BMW	Bonded Manufacturing Warehouse
CTVE	TVE operated in cooperation with an SE or STE
CV	Coefficient of variation
DTI	Department of Trade and Industry
EPZ	Export-processing zone
EQ	Export quota
FOB	Free on board
GNP	Gross national product
GTEB	Garment and Textile Export Board
ILO	International Labor Organization
ITVE	Independent enterprise form of TVE
JV	Joint venture
KMT	Nationalist Party, Taiwan
MITI	Ministry of Trade and Industry
NDDC	Nationalist Dairy Development Corporation
QC	Quality control
RTW	Ready to wear
SE	State enterprise
STE	State trading enterprise
TVE	Township-village enterprise
YOE	Year of enterprise establishment

1

Toward an Alternative Path of Economic Development

An Introduction

Yujiro Hayami

The traditional paradigm in development economics, as espoused by theorists from Marx to W. A. Lewis, assumed that the process of modern economic growth is necessarily associated with a major shift in labor from rural areas to urban industrial centers. In this process, manufacturing activities in rural households and small workshops are outcompeted by modern factory production in the urban centers. As a result, the rural sector becomes increasingly specialized in the primary production of food for the growing urban population and in cash crops for export earnings to support domestic industrialization, while the rural labor force is linked with the urban informal sector to form a reserve for the urban formal sector.

Nevertheless, the logic of economic development does not dictate that industrialization and urbanization are necessarily intertwined and inseparable, as assumed in the traditional paradigm. The studies reported in this volume examine whether there is an alternate route to economic development in which there is movement of the modern production base into the rural sector, rather than migration of the rural labor force into the urban sector. In this alternative path, widespread rural industrial activities could be organized in a decentralized manner by exploiting not only the physical labor but also the entrepreneurial ability of rural people—two resources that were underutilized in the past. This rural-based development strategy, if found to be feasible, could alleviate the major difficulty in the tradeoff between growth and equity that confronts developing countries.

Indeed, the strong population pressure now faced by developing countries has created serious consequences for urban-based development according to the traditional paradigm.

Although population growth in many developing economies began to decelerate in the 1970s, the rapid growth of the labor force has continued as the population from the years of high birth rates has matured and entered the workplace. In most developing economies, increases in the rural labor force have not been matched by increases in available farmland. The significant decline in the farmland available to each worker has aggravated rural poverty, increasing the fragmentation of landholdings and leading to growing numbers of landless agricultural laborers. The result has been large-scale migration from rural to urban areas. Only a small fraction of the migrants, however, have found productive employment in modern industries, even in the economies of Southeast Asia that have recently recorded significant industrial development. This is partly because the modern industrial sector is still a minor part of the total economy, and partly because industrial technology has been imported from developed countries that have biases toward high capital intensity. The majority of city dwellers are thus forced to seek their subsistence from informal economic activities while living in urban slums.

How are nations to cope with growing poverty and inequality in both rural and urban areas? If the core of this problem is determined to be population pressure that reduces the returns to labor relative to capital and land, maximum effort must be allocated to the expansion of demand for labor. Two obvious areas for the expansion of the demand for labor are agriculture and small- and medium-scale industries. But the Green Revolution technology that has contributed greatly to increases in food production and farm employment in Asia is not considered sufficient to solve the problem. The second option must be explored.

The evidence indicates that rural nonfarm activities carried out mainly in small-scale enterprises (including farm household enterprises) are a very important source of employment and income in developing economies. As much as 30 to 50 percent of the rural labor force is either primarily or secondarily engaged in a wide range of nonfarm activities, which generate 20 to 40 percent of rural household income. Particularly significant is rural manufacturing. Employment in this sector often exceeds that in urban manufacturing establishments; rural-based, small-scale industries are generally not only more labor-intensive, but also more productive per unit of scarce capital than their large-scale counterparts (Chuta and Liedholm 1979; Kilby and Liedholm 1986). These observations suggest a hypothesis that the promotion of rural industries is one of the most effective ways to alleviate rural poverty and pathological urban growth. To prosper, these industries require the support of a network of commerce and other service activities. For optimal efficiency, local commerce and industry should be organized to utilize human resources in rural areas with low opportunity costs.

The historical experience of Japan has proved that the development of labor-intensive, small-scale industries is the most effective way to achieve the dual goals of growth and equity. In the initial stage of modern economic growth in Japan, a large number of entrepreneurial peasants participated actively in trading and manufacturing. This process had already begun in the feudal Tokugawa period (1600–1868) in response to the gradual development of the market economy, and it accelerated with Japan's opening to foreign trade

and national unification by the Meiji Restoration in 1868 (Smith 1956, 1959, 1988). The contributions of these small-scale, rural-based enterprises to the national economy were no less significant than those of large, modern corporations developed by the urban entrepreneurs who emerged from the preindustrial merchant class (such as Mitsui and Sumitomo) and the former warrior class (such as Mitsubishi). This development of rural-based enterprises made it possible for Japan's industrialization to be less capital-intensive than that of other latecomers to modern economic growth (Smith 1988).

In the past, small-scale enterprises have been seen as being exploited by their larger counterparts in an effort to take advantage of cheap labor under factor market dualism, characterized by differentials in wages and interest rates between large and small enterprises. These small enterprises have also been thought to tend to fail when the economy reaches maturity and factor market dualism is eliminated. This has not, however, been the experience of Japan's economic development. Even today, long after the demise of factor market dualism, Japan's industrial strength is largely based on numerous small-scale enterprises, many in rural areas (Kiyonari 1980; Patrick and Rohlen 1987). It appears that this experience has been replicated in Taiwan, China.

Is there a prospect for developing countries today to follow a similar pattern of rural-based development in commerce and industry? If sufficient entrepreneurship can be mobilized in rural communities, then perhaps this is possible. A recent pilot study for Indonesia (Hayami and Kawagoe 1993) found that local marketing systems (consisting of a large number of petty traders and processors based in rural villages) work efficiently in economizing on the use of scarce capital and educated manpower, while making intensive use of local resources, especially labor that has a low opportunity cost. The peasant entrepreneurs who organized this system were found to be ingenious in designing and applying innovative trading practices and contracts for sharing risks and minimizing transaction costs through the effective use of community relations.

The findings of this pilot study for Indonesia, when compared with the historical experience of Japan, suggest the possibility of rural-based economic development in developing countries and offer a model for postsocialist states that are working to create and organize markets. To explore the possibility further, this research project attempted to fill the gap between the observations from the Indonesian case study and conjectures from Japan's historical observations through in-depth case studies of historical experiences and current developments in East Asia.

The studies in this project focus on the social and institutional context for the creation and development of rural entrepreneurship, although quantitative information was sought as well. Special emphasis is given to conditions that allow "relational contracting" to become the dominant production organization in the vertically integrated system. The term *relational contracting* is used here to represent the long-term, continuous contract relations between small, rural-based manufacturers and traders and/or agents of large, urban-based firms, as well as between the rural-based manufacturers and their workers, that are enforced and maintained primarily through personal ties and community obligations. This contract mechanism is critically important as a channel to convey demands from large

markets, both domestic and foreign, to small manufacturers in rural areas, who are subject to severe imperfection of market information. Development of the relational contract is expected to increase the access of rural labor to nonfarm economic activities. Thus, "the alternative path of development" that we are going to explore is not the self-contained development of the rural sector. Instead, it is the expansion of industrial and commercial activities based on rural labor and entrepreneurship, which are inseparably linked with the activities of urban entrepreneurs. The alternative path is thus envisioned as the balanced growth of the rural and urban sectors, which is a contrast to the disproportionate growth of the latter in the traditional paradigm.

Relational Contracting and Vertical Integration

As a basic working hypothesis, it can be postulated that the key to the wide diffusion of industrial and commercial activities in rural areas is development of the relational contracting system relative to the vertical integration system.

Alternative Modes of Organization

In vertical integration, the production and marketing activities of a commodity (or commodities), from production of raw materials to delivery of the final product to consumers, are integrated, either partially or wholly, and under the control of a centralized management hierarchy. In contrast, these activities are decentralized in the relational contracting system under the generally autonomous management of independent entrepreneurs, coordinated by trade contracts, and usually organized by a principal who controls a link in the marketing chain.

For example, a cotton-spinning company may establish a weaving division within the firm to ensure an outlet for its yarn; alternatively, it may contract out the cloth-making process to outside weaving houses. The latter is "relational" if it is developed as a long-term contract relationship that is enforced by accumulated personal ties and mutual trust. Contracts tend to be interlinked in the relational contracting system. For example, in a "putting-out" contract, a principal (for example, a spinning company) advances materials (yarn) for processing to an agent (a weaving house), and later collects the finished products (cloth) at the piece-rate payment. This system thus combines contracts for the supply of materials and the purchase of products with credit contracts for financing part of the agent's working capital and, if looms are loaned, fixed capital in the processing machines. Even in simpler "advance-order" contracts, in which the principal guarantees the purchase of finished products but does not advance materials, the provision of extra services such as credit guarantees and technical guidance is usually involved if the contract is to be considered relational.

Relational contracting and vertical integration can be considered alternatives to an efficient market. If the market is efficient, with no transaction costs and no risk, impersonal

spot transactions based solely on prices are sufficient to coordinate an economywide division of labor, and neither vertically integrated firms nor interfirm cooperation through relational contracting should be needed.

In the real world of incomplete information, however, transaction costs are significant and risk is high; this is especially the case in developing countries, where markets are small and segmented, the supply of needed market information—-such as product standards, grading, and brand names—is not well established, and insurance and credit institutions are not sufficiently developed to cope with market risk. Thus, a trader who finds that a commodity is in great demand in an urban market or abroad will face the difficulty of procuring adequate quality supplies in a timely manner from the spot market. In order to exploit the profit opportunity, he may have to build and manage a factory for the mass production of standardized commodities; in this way he vertically integrates manufacturing and trading activities. Alternatively, he may organize relational contracts with autonomous producers to assure a timely supply of the needed commodities of the quality and quantity required.

If vertical integration is commonly chosen, the resulting industrial structure will include a small number of large enterprises, which are likely to be located in urban-industrial centers to take advantage of economies of urban agglomeration, especially access to market information. There is little doubt that only with the development of the relational contracting system will industrial and commercial activities be spread widely over the rural sector. While the economies of agglomeration may also work among entities clustered in an urban site under a relational contract, this advantage can be minor compared with the merits of mobilizing rural labor and entrepreneurship, with their low opportunity costs, if the efficient design and practice of relational contracting can effectively reduce information imperfection in the rural areas.

Development of relational contracting is not based solely on the initiative of urban business principals—who hold information on demand in wide national and international markets—but also can be promoted by rural-based entrepreneurs. It is quite possible for rural entrepreneurs to approach urban traders and offer contracts for their mutual benefit. Irrespective of who takes the initiative, the adoption of relational contracting by rural entrepreneurs is an innovation in marketing organization that allows access to new markets. This innovation is often associated with the production of new commodities (such as nylon cloth) based both on new materials (nylon yarn) and production processes (power looms). In that sense, the rural entrepreneurs who enter relational contracts with urban principals can legitimately be called "innovators" in the definition of Schumpeter (1961, p. 66). The mobilization of such latent entrepreneurial ability within the rural population is the key to success in the rural-based development paradigm.

Spectrum of Contracts

It must be emphasized that both the vertical integration and subcontracting systems are not homogeneous within each category; they include a wide variety of organizations. A

vertically integrated firm can be structured in a rigid management hierarchy with centralized decisionmaking. It can also be organized in a more decentralized way—in the extreme, each division can be structured in a nearly autonomous management unit, with interdivisional transactions (such as those for parts supply and assembly) negotiated among the divisions and accounted for in market or imputational prices.

Similarly, the relational contracting system can be tightly structured in a hierarchy. Organized from the parent or core firm to the higher-tier and lower-tier subcontractors, it involves intensive guidance, consultation, and assistance in managerial, financial, and technical aspects, as exemplified by the subcontracting arrangement commonly used in the automobile industry in Japan today. Relational contracting in this form of subcontracting is not very different from the "divisionalized" form of vertical integration. At the other extreme, however, the relational contracting system can be organized loosely through short-term contracts in a way that differs little from spot-market transactions.

Thus, various forms of vertical integration and relational contracting range along a continuum. In this sense, the popular dichotomies in the theory of industrial organization—such as "make or buy" and "hierarchy or market"—are considered to represent the polar cases of this spectrum. One extreme is to make all materials and parts within a hierarchical, internal organization, and the other is to rely completely on purely impersonal spot-market transactions.

Merits and Drawbacks of the Alternative Systems

The major goal of this study is to identify the social and institutional conditions that generally prompt the selection of the relational contracting system, thus identifying the policies that will strengthen these conditions in support of the rural-based development of commerce and industry. The elements of this critical issue will be detailed in the next section. In preparation for this presentation, the merits and drawbacks of relational contracting relative to the vertical integration system will be identified through risk and transaction costs according to orthodoxy in the theory of industrial organization (Coase 1937; Alchian and Demsetz 1972; Williamson 1975, 1985).

Vertical integration is essentially the system of hiring labor to work within a firm under the command of its management, whereas subcontracting is the system of contracting out the work to outside management. Naturally, the risks and transaction costs associated with contracts "hiring-in labor" and "contracting-out work" are distinctly different. In the vertical integration system, both capital and labor costs are largely fixed for the firm, at least in the short run. Therefore, risks arising from fluctuations in both the product and material input markets are predominantly shouldered by the principal (firm management) relative to the agent (hired labor) in the vertical integration system. In the relational contracting system, the schemes for risk-sharing can be determined by the principal (parent firm) and the agents (subcontractors).

The transaction costs associated with hire-in labor contracts, especially the cost of monitoring the work effort of hired laborers, are known to be very high. Indeed, how to pro-

mote work morale and prevent shirking by employees through incentives such as promotions and bonuses have been central issues in the theories of industrial management and organization. There is no cost to the principal in monitoring the work effort of contracted-out labor, and the costs are relatively modest for the agents, whose employees are typically few in number and easy to monitor. The monitoring cost is especially small where the labor is supplied by family members and friends, which is usually is the case in rural-based enterprises.

The principal or parent firm management in the relational contracting system, however, may face severe difficulties in forcing its agents to observe the terms of a contract, such as the quality of products to be supplied and the date of their delivery. For example, an automobile assembler may be greatly harmed by a loss of reputation in the market if he uses parts supplied by a subcontractor that are later found to be inferior to the contractually agreed quality standard. He may also suffer losses by operating his plant at less than full capacity if a sufficient supply of parts is not delivered at an agreed-upon date. The cost of preventing these moral hazards, by such means as a formal quality inspection system, could be very significant when subcontractors are shrewd in exercising opportunism.

At the same time, relational subcontractors are also not free from transaction costs. For example, if the parent firm refuses to accept the delivered supplies or requests a price reduction for a false claim on a defect in product quality, the subcontractor may face bankruptcy. Thus, whether relational contracting will come into common use will depend on how many risks and transaction costs are associated with this system relative to the vertical integration system, and how the risk and transaction costs are distributed between principal and agents.

Conditions for Relational Contracting

What, then, are the social and economic conditions under which the relational contracting system becomes relatively more advantageous, and thus more commonly used, than the vertical integration system?

Technology and Commodity Characteristics

An overriding condition for use of relational contracting is the divisibility of a production process among accountable units—accountable in the sense that the inputs and outputs of one unit can be distinguished and measured separately from those of other units. This characteristic is often associated with scale economies that stem from the use of indivisible capital. For example, in the production of liquor for export, which requires a relatively large plant, it is difficult to break down the entire process into accountable components—material preparation, fermentation, distilling, bottling, and the like—that can be managed separately in different workshops. In general, production processes that flow continuously within a single plant, such as the production of chemical materials, are managed under the

vertical integration system. In contrast, industries such as machine manufacturing and metalworking, which involve processing beyond the stage of raw material production (including low-level processing, such as rolling iron plates while pig iron from a furnace remains heated), can be broken down into many accountable components, and thus are more amenable to relational contracting systems.

The demand for a commodity also has an important influence on the system chosen. One drawback of the relational contracting system is the relative difficulty of producing a large number of homogeneous products. Therefore, when there is a large demand for a commodity at a standard quality, the vertical integration system is likely to be preferable.

In the early period of modern economic growth in Japan (from the late nineteenth to the early twentieth century), local traders who assembled woven textiles for domestic markets commonly practiced the putting-out system. Traders advanced yarn to small cottage weavers, and executed contracts that provided for woven cloth to be collected by the traders at a piece-rate service fee. In contrast, those who specialized in the collection of selected textiles for export markets that required assembly of a large amount of homogeneous products generally built their own workshops and employed their own workers.

Factor Market Dualism

Developing economies are often characterized by factor market dualism—labor wage rates are positively correlated with firm size, and large firms have much easier access to low-interest loans than small firms. Under this structure, there is a strong incentive for a large firm to contract work out to small firms rather than to hire labor within the firm to minimize wage costs. The large firm would thus be induced to make the effort to develop relational contract relationships with the small firms so that agents' moral hazards arising from information asymmetry could be effectively curbed.

At the same time, the credits that large firms can mobilize at a relatively modest cost are often advanced to small producers, who suffer from severe capital constraints. One such example is the advance of materials for processing in putting-out contracts. These credit arrangements are commonly used to enforce assured commodity delivery and other contractual terms.

Community and Market

The practice of creating "credit ties" represents one approach to strengthening enforcement of the relational contract by interlinking transactions. It is also common for the parent firms to provide technical assistance and other services to subcontractors. Related to this approach is the attempt to develop a long-term contractual relationship or to develop an expectation that a contract will continue to be repeated as long as contractual agreements are observed. Because establishing a stable, long-term contract covering many transactions entails significant time and effort, the expected gains from the maintenance of such a relationship are likely to exceed the short-term gains of exercising opportunism for both

contract parties. In this way, the likelihood of a "prisoner's dilemma" can be minimized (Hayami and Otsuka 1993).

The power of long-term, interlinked contracts to prevent moral hazards can be strengthened if they are embraced in a community relationship that includes not only the transaction of economic goods and services but also the exchange of personal favors and obligations. Anthropologists, sociologists, and political scientists commonly call such a relationship a patron-client relationship—"a special case of dyadic (two-person) ties involving a largely instrumental friendship in which an individual of higher socioeconomic status (patron) uses his own influence and resources to provide protection and/or benefits for a person of lower status (client) who, for his part, reciprocates by offering general support and assistance, including personal services, to the patron" (Scott 1972: 8).

The ability of entrepreneurs to develop an efficient relational contracting system with low transaction costs while exploiting the merits of this system, such as risk-sharing and strong work incentives, may largely depend on the social tradition of communal relations. In a society where this tradition is strong and people are accustomed to patron-client relations, relational contracting may be structured and operated relatively more efficiently than elsewhere. Rural economies in developing Asia may thus have a good chance of developing efficient relational contracting arrangements based on their community tradition.

It is important to recognize that the incorporation of such community relations into a relational contract does not weaken, but strengthens, the market mechanism. When there is asymmetry in information about product quality, the market is bound to be inefficient, or vanish altogether (Akerlof 1970). The effective use of community relations can be considered an institutional innovation to correct this market failure (Hayami 1989). In this sense, the relational contract is a market institution and, in the absence of a market, it is likely to be replaced by the vertical integration system. This hypothesis is consistent with the organization of state enterprises in the former Soviet Union and other socialist economies, which are geared toward vertical integration in its extreme.

Government Policies

Unless there is competition in the market, relational contracting may turn out to be an instrument of monopolistic exploitation. Both economic efficiency and equity are endangered in the absence of a relative balance in bargaining power between the contracting parties. This balance is possible only when the parent firms compete with each other and when subcontractors have the option to shift from one parent firm to another, even if such shifts are rare.

Therefore, government policies to limit market entry or to increase the advantage of large-scale operations—through concentration of import licenses and institutional credit in a few large firms, for example—tend to suppress the development of efficient relational contracting. Capital subsidization, using either direct subsidies or indirect subsidies such as tax exemptions and tariff escalation, which are usually captured disproportionately by large firms, will discourage decentralization based on relational contracting, thus encour-

aging vertical integration (Little, Scitovsky, and Scott 1970). It might not be unreasonable to hypothesize that such government interventions are behind the failure of programs to develop cottage industry in some developing economies under the regime of import-substitution industrialization. This hypothesis calls for empirical testing.

At the same time, government services for small-scale enterprises, such as technical development and extension, dissemination of market information, legal consultation, and management training, will encourage decentralization by promoting the relative advantage of small-scale operations and by strengthening their bargaining position (Staley and Morse 1965). Above all, public investment in infrastructure such as rural electrification, transport, and telecommunication systems provide critical support for extension of the industrial and commercial network based on relational contracting.

A Historical Perspective

The theories and hypotheses advanced in the previous sections may be understood more concretely through a few examples from the history of modern economic growth in Japan.

Development of the Putting-Out System

One interesting example is the development of the putting-out system in the textile industry. A popular presumption is that this system is a premodern form of industrial organization that is usually replaced during the course of modern industrialization by the centralized workshop and hired-in labor of the factory system. In Japan, however, the putting-out system became common in textile weaving after the modern period of economic growth was initiated by Japan's opening to international trade in the late nineteenth century.

A case study from Saitama Prefecture shows that before the Meiji Restoration (1868), farmers wove cloth from yarn they spun from their harvested cotton; the woven cloth was collected by guild merchants (*kabu nakama*) in towns for transshipment to Edo (Tokyo) (Kandachi 1975: 87–100). The opening of international trade brought a large increase in domestic demand for cotton cloth, partly because of general increases in farm product prices and incomes and partly because of declines in the prices of cotton products brought about by import competition (Tanimoto 1987). This opportunity was exploited by rural-based traders outside the guild, who leased looms to farm households and advanced them imported yarn in piece-rate, service-fee contracts; the woven cloth collected by these traders was mainly transshipped not to the traditional Edo market, but to remote rural areas such as Hokkaido and Tohoku (Kandachi 1975; Tanimoto 1986).

This example seems to indicate that the putting-out system is an efficient mechanism for meeting dynamic demand expansion by mobilizing low-opportunity-cost labor. Farm family labor, idle between farm tasks and household chores, is particularly appropriate for this use, and carries a minimum labor-monitoring cost, in addition to other merits such as risk-sharing and low capital cost.

This system continued to predominate in the Saitama area. Part of the reason may have been that community ties between rural-based traders and farmer-weavers worked as an effective brake on the latter's moral hazards, such as using less yarn than required for a standard cloth quality or using a loom leased from one trader for production for other traders. In more urbanized areas, such as southern Osaka, these moral hazards were reported to be serious, and many traders moved to workshops based on hired-in labor (Abe and Saito 1987; Abe 1990). Such moral hazards are known to have been serious in the proto-industrialization stage of Western Europe (Landes 1969: 44).

The continued dominance of the putting-out system in the Saitama area may be the product of the predominance of domestic markets as the destination for the striped cotton cloth woven in this prefecture, a market that did not require the quality standardization needed for exports. In contrast, it has been said that the factory system was preferred for the production of commodities for export, such as calico and glossy silk (*habutae*). A major puzzle, however, is that the two major areas that produced glossy silk, Ishikawa and Fukui Prefectures, had very different organizations. In 1905, as many as 60 percent of the looms in Ishikawa were operated by cottage weavers and leased from traders under putting-out contracts; only 13 percent were under contracts of this kind in Fukui (Kandachi 1975: 138).

The technological progress represented by the development of power looms appears to have had significant impact on the system chosen. With the adoption of power looms, local traders who had formerly leased out looms to cottage weavers generally moved to operate the machines in their own shops, but this did not bring about the demise of the putting-out system. These trader-weavers usually entered putting-out contracts with larger traders that included clauses on the provision of trade credit. These relationships of small local traders with large traders had been common even when the small traders were principals in putting-out contracts with farmer-weavers. Such a hierarchy of traders can also be observed in developing economies today (Hayami and Kawagoe 1993).

It is important to recognize that the development of power looms did not significantly increase the optimum scale of operation. Until the beginning of this century, when automatic looms were based on water and steam power, their installation required relatively large factories. As electrification progressed and small motors and low-cost power looms became available, however, even small weaving houses began to introduce power looms (Minami, Ishii, and Makino 1982).

A case study of a village in Fukui Prefecture showed that the weaving houses that entered the business in the 1920s, when electricity became available, were generally much smaller than the houses that had begun work earlier. Correspondingly, these new enterprises were initiated by middle-class peasants with relatively small land-asset holdings; the older businesses were operated predominantly by landlords and upper-class peasants (Kandachi 1975: 222–68). This example clearly indicates that modern industrial technology is not necessarily biased in favor of large-scale operations, but can be developed to increase the relative advantage of small manufacturers.

The Origins of Modern Subcontracting

Of major interest for our study is how the traditional putting-out system that was organized mainly by local traders in the early stage of modern economic growth has been transformed into the modern subcontracting system of Japanese industry today. The history of Japan clearly shows that the putting-out system is not limited to the stage of development characterized by factor market dualism and low-capital-intensive technology, as hitherto assumed (Shinohara 1968). The weaving industry in Ishikawa and Fukui, for example, continues to be dominated by small and medium-size enterprises and is pervaded by electronic control and other high technologies, although factor market dualism disappeared in the mid-1960s. These enterprises, which today are engaged mainly in weaving chemical textiles, are organized in a putting-out system that is essentially the same as the system that evolved before the era of high economic growth beginning in the mid-1950s.

Putting-out contracts in Ishikawa and Fukui are now organized not only by local traders but also by large chemical fiber manufacturers and large trading houses (*sôgô shôsha*) based in Tokyo and Osaka. Optimal combinations of contracting parties and contractual forms are deliberately chosen to best accommodate the production of different products for a variety of markets (Itoh and Urata 1993). The large chemical companies have preferred this system to vertical integration, not because of factor market dualism, but because of such advantages as low labor-monitoring costs, strong work incentives for management, and flexibility in employment and staffing.

These observations are consistent with the hypothesis that the putting-out system is not an organizational form destined to be replaced by the factory system in the process of modernization (Pollard 1965; Saito 1984). Rather, the advantage of this system seems to increase as the economies advance to a stage characterized by high per capita income and a diversification of consumer demands. Indeed, in Japan today, the putting-out system for weaving chemical textiles is only one of many variations of the subcontracting system practiced by modern high-technology industries, such as automobiles and electronics. These industries have developed highly sophisticated, long-term, and interlinked contracts between an assembler and many parts suppliers that minimize moral hazards and opportunistic behavior between the contracting parties. One major force commonly used by a parent company to control subcontractors is the establishment of quasi-community relations of the patron-client model. At the same time, other devices even stronger than market competition have been designed to enhance competition within a relatively closed corporative group (*keiretsu*) (Asanuma 1985, 1988; Wada 1991).

With these efforts, coordination between a parent company and subcontractors has been made extremely precise, as can be seen in Toyota's famous just-in-time (*kanban*) system. The improved subcontracting system is now considered a major organizational innovation that underlies the strength of Japanese industries (Abegglen and Stalk 1985; Aoki 1988).

One central question addressed in this volume is how much of this modern subcontracting system can be explained as an inheritance from the traditional putting-out system and how much is an innovation in response to modern industrial needs. The likely answer is that

these two factors have reinforced each other to create the present form. Thus, our investigation must focus on the mechanism and the process of their interactions. It is especially important to our study to identify the role of traditional community relations. It is said that industrial subcontracting is more tightly and effectively organized in Japan than in Europe and North America. How much of this modern success in subcontracting is based on the intensive community relations nurtured in the rice-based village communities that relied heavily on communal gravity-irrigation systems in the mountainous topography of Japan, which required strong cooperation and tight coordination among villagers?

In one of the hypotheses that considers modern subcontracting a relatively recent product of management efforts rather than the result of historical tradition, it has been argued that the current, highly sophisticated, and tightly structured subcontracting system has its roots in government guidance under the Resource Mobilization Program during World War II (Okazaki and Okuno-Fujiwara 1993, chapter 1). This hypothesis is plausible, considering that close coordination between assemblers and parts suppliers was critical to the assured supply of high-quality parts needed to produce weapons and other strategic goods that required great precision.

Nevertheless, a major puzzle remains. Why did the government try to strengthen the subcontracting system during the war, rather than consolidating assemblers and parts suppliers into a vertically integrated production unit of the Soviet model? The Resource Mobilization Program was designed, in many respects, in accordance with the methodology of Soviet central planning. Is it not unreasonable to hypothesize that social traditions in Japan made decentralized organizations based on relational contracting more efficient relative to vertical integration, even in the autocratic regime during the war?

The main task of this project, therefore, is to investigate the mechanism and process of the mutual reinforcement exerted by institutional traditions, modern management efforts, and government guidance that has produced an optimum industrial organization in each stage of economic development. For this task it is indispensable to identify the entrepreneurs who have accomplished such institutional innovations and how much potential they have for reaffirming the rural-based development paradigm.

Major Findings of the Case Studies

In order to approach this problem, eight case studies were undertaken, and the results are reported in this volume. The major findings of these individual studies are summarized here in their contributions to the research goal. The three chapters following this introduction are case studies on the historical experiences in Japan. Next, five chapters deal with current developments in East Asia.

Chapter 2: Kawagoe on Rice Marketing in Prewar Japan

Kawagoe's study is focused on the impact of railway development on rice-marketing organizations. Popular views, such as "populism" in the United States, have presumed that the

modern technologies represented by the railways were used by large capitalists to exploit small farmers, artisans, and petty traders. Contrary to this presumption, Kawagoe demonstrates that the construction of the railway network in the early Meiji period gave rise to active participation by peasant entrepreneurs in rice marketing, which had been monopolized by large, privileged merchants in port cities since the feudal Tokugawa period. The high risks and large capital requirement associated with shipping rice by sea had made it difficult for small traders to engage in rice marketing across regions. When railways removed this constraint, a large number of small traders, many of whom came from the middle peasantry, began to cut into the business of shipping rice to metropolitan areas. Further, growing competition in the nationwide market, which was integrated by national unification and the railway network, induced group actions at a local level to establish institutions that could reduce transaction costs through such measures as grading and use of tradable rice drafts. The system worked efficiently, with little government intervention in the market. Kawagoe clearly shows that a large reserve of entrepreneurial talent does exist in rural areas, and it can be mobilized with adequate support from public infrastructure and government avoidance of direct market intervention. The high responsiveness of rural people to new marketing opportunities demonstrated in his study represents a sharp contrast to the traditional image of peasants in developing economies, which granted them neither the willingness nor the capability to undertake commercial and industrial enterprises.

Chapter 3: Itoh and Tanimoto on Cotton Weaving in Japan

Based on a detailed historical analysis of the Iruma area, Itoh and Tanimoto provide strong evidence in support of the hypothesis that the putting-out system practiced by rural entrepreneurs was an efficient form of relational contracting, well adapted to meet the increased market demands for cotton cloth brought about by national unification and the opening of international trade in the early Meiji period. The advantage of this system in mobilizing rural labor, with its low opportunity costs, through such measures as employing females in farm households during the off-season in farming, is clearly illustrated. Of particular interest is the description of highly complex, intertwined financial flows corresponding to commodity flows among rural-based weaving entrepreneurs and town-based wholesalers engaging in shipments to distant markets. Many financial transactions were made with drafts and money orders that were purely private and had no official endorsement. The efficiency in relational contracting between traders and weavers should have been supported by community ties in a relatively narrow area of high population density. The authors' hypothesis that high population density was a major factor in the persistence of the putting-out system during the period of modern economic growth in Japan, compared with its early demise in England, has important implications for the applicability of this system to developing economies, and thus needs further verification. Itoh and Tanimoto illustrate several interesting examples of how the relational contract arrangements used in Iruma in the early Meiji period are still being used by modern textile enterprises in Japan as a basis for their organizational efficiency.

Chapter 4: Wada on Toyota's Relationship with Suppliers

Toyota's subcontracting relationship with parts suppliers can be considered a prime example of the successful application of relational contracting to modern industry. Wada traces the evolution of this relationship from the beginning of Toyota's automobile production in 1933. It is interesting to learn that Kiichiro Toyoda, the founder of the Toyota Motor Company, intended to build "a pastoral factory" in Koromo (today's Toyota City), which was then a typical rural town with few industries. Kiichiro's idea was not only to locate the factory in a pastoral environment, but also to build a production organization in which Toyota's assembly plant would be surrounded by trusted parts suppliers who were tied together by a common community spirit. To this end, Toyota tried as much as possible to enter contracts with manufacturers located near the Koromo factory who were receptive to Toyota's guidance, even if they had no previous experience in the precise, sophisticated work needed for automobile production. Kiichiro's idea of the "pastoral factory" may have stemmed from his knowledge of the applicability of community relationships to industrial production, which he may have learned through experience as a supplier of automatic looms for rural-based weaving entrepreneurs before he began automobile manufacturing. In any case, it is fascinating that the traditional community relationship became a guiding principle for a modern big business such as Toyota.

Chapter 5: Kikuchi on Garment Manufacture in the Philippines

Based on the wealth of information collected from his own field survey, Kikuchi identifies the mechanism that allowed the putting-out contract to become an effective instrument for mobilizing rural resources to meet the rapidly expanding demands of garments for export. The contract is customarily closed between an urban-based wholesaler (called "exporter"), who collects garments of a given standard for foreign buyers, and a rural entrepreneur (called "subcontractor"), who has a small workshop for garment processing. The subcontractors are generally women from the rural middle class who have some education, but no special skill in garment making. The case reported by Kikuchi represents an extreme of how far the division of labor can be pushed within the putting-out system: the process of garment production is subdivided into many simple tasks, such as cutting, sewing, and button placing, so that work efforts are easily measurable for piece-rate payments. This system seems to show that a division of labor to the high degree illustrated by Adam Smith's famous example of a pin factory can be implemented in a decentralized manner through coordination across small workshops. In addition to this device for the effective use of piece-rate payment incentives, the urban principals try to strengthen personal ties with reliable subcontractors by giving favors. Similar efforts are made by subcontractors on behalf of their workers. The most important qualification for subcontractors is the development and maintenance of good relations with both exporters and workers. These ties allow the subcontractors to secure a steady flow of orders from the former and conscientious work from the latter. An interesting finding is that a majority of these sub-

contractors have prior experience in petty trading, which seems to support the hypothesis that commerce is the training ground for industrial entrepreneurship.

Chapter 6: Ohno and Jirapatpimol on the Garment and Weaving Industries in Thailand

Rural-based developments in the garment and weaving industries in Thailand have many similarities to those seen in the Philippines. Work is carried out mainly by women who work as subcontractors of urban wholesalers or factories. The women who act as rural entrepreneurs in the garment industry usually belong to the lower segment of village communities and used to be sewing workers in urban factories, whereas those in the weaving industry came from the upper segment. A very important finding is that putting-out contracts are common in the garment sector, whereas advance-order contracts with no provision by the principal of materials for processing are used in the weaving sector. This difference is explained largely by the much stronger reliance of garment subcontractors on urban principals for the supply of external market information on the specification of products and, hence, materials. The difference in the ability to finance working capital between garment and weaving entrepreneurs, however, could well be another significant reason. The comparative advantage of rural over urban entrepreneurs in the management of rural labor through community relationships is certainly a crucial factor for the urban entrepreneurs who contract work out to rural entrepreneurs. Another major reason is the inapplicability of minimum wage laws and other labor regulations to small rural enterprises, which makes their effective labor costs much lower than those of large urban factories, as demonstrated clearly in the Thai case study, as well as in the Philippine study by Kikuchi.

Chapter 7: Liu and Otsuka on Village-Township Enterprises in China

This study focuses on the contract mechanism that enables village-township enterprises in postreform China to be associated with state enterprises and foreign businesses so that they can engage in garment production for export. Despite progress in economic liberalization, foreign trade is still largely monopolized by state exporting companies, which are difficult for village-township enterprises to access directly. Their export-oriented production thus must take the form of subcontracting with state enterprises or joint ventures with foreign firms. A major advantage for state enterprises that enter a relational contract with village-township enterprises is the escape from the high labor costs created by the strong welfare program in the state enterprises. The advantage for the village-township enterprises is that they receive transfers of technical information and trained manpower. A distinctive feature in the organization of the garment industry in China is that enterprises are very large—not only state enterprises but also village-township enterprises are much larger than those usually found in market economies such as Japan, the Philippines, and Thailand. This comparison seems to support the general hypothesis that the absence of

market promotes vertical integration. A major puzzle is why the village-township enterprises do not practice subcontracting with small workshops and households, as is common among rural entrepreneurs in the Philippines and Thailand.

Chapter 8: Lee and Suh on Rural Enterprises in the Republic of Korea

Lee and Suh try to show why, despite the remarkable success of industrialization in Korea, rural-based industries have largely failed to develop, especially in comparison with the record of Taiwan, China. Part of the failure may be explained by an insufficient allocation of public resources to the rural sector. Increased government support in recent years, however, has not yielded significant results. Government support has included such measures as government provision of needed infrastructure for rural industrial estates and generous credit and tax treatment for the establishment of factories, which are often underutilized. Lee and Suh made a field survey in a local township where rural entrepreneurs have been exceptionally active in promoting the weaving industry for both urban and export markets through de facto relational contracting with urban wholesalers. In this exceptional case, the local entrepreneurs made good use of the industrial estate provided by the government. In contrast, several neighboring estates that invited urban entrepreneurs to establish factories do not show comparable success. Lee and Suh conclude that in order to achieve genuine rural industrialization, it is necessary to promote local rural entrepreneurs rather than to transfer urban enterprises to rural sites. The major question to be answered is, of course, how to mobilize the entrepreneurship rooted in the rural areas.

Chapter 9: Lane on Comparisons Between the Republic of Korea and Taiwan, China

Lane offers a political science perspective on the major contrast in rural industrialization between the Republic of Korea and Taiwan, China. First, he documents the major disparities in public infrastructure in rural areas to explain the different performances in rural industrialization between these two economies. He then tries to explain the differences through their polities. In Korea, the autocratic, centralized governing structure is considered to have hindered the allocation of public resources to rural areas. In particular, the system of appointment of key government officials in local administrations by the central government instead of their election has closed the channel that conveys the demands of local people in the allocative decisions concerning public resources. This Korean system is contrasted with Taiwan, China's policy of electing local administrators. It is plausible to identify this difference in local administrative structure as a major factor in the performance of rural-based industries. Yet it remains to be explained how crucial this factor is in comparison with many others, including initial conditions such as the colonial development strategies of Japan, the destruction of the Korean War, and the policies of the governments following independence, especially with respect to foreign direct investments.

Conclusions

These case studies provide more questions than answers, and that is what we intended. Because of the highly elusive nature of informal economic activities, our investigations were necessarily based on intensive personal observation in the field, as well as the examination of microhistorical data, rather than formal questionnaire surveys. Findings from such case studies are bound to be more illustrative (or even anecdotal) and suggestive than they are analytical and conclusive. Yet comparisons of our case study results can produce many interesting empirical regularities, a basis for the construction of meaningful hypotheses. Indeed, Ohno and Kikuchi's comparison of the five case studies of textile industries (chapter 10) produced plausible propositions on the choice of contract in the course of integration of local markets into wide national and international markets. It may not be an unreasonable expectation that the efforts to replicate the case studies further, both within and beyond East Asia (as suggested by Bhatt in chapter 11), as well as to process their results for more formal testing of hypotheses, will identify the conditions that will allow developing economies to be guided into the "alternative path of development." It is hoped that the studies in this volume will be a step toward such a research accomplishment.

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Part I. Historical Experiences of Japan

2

Technical and Institutional Innovations in Rice Marketing in Japan

Toshihiko Kawagoe

The marketing of agricultural commodities plays an important role in the economies of developing countries with dominant agricultural sectors. Limited access to knowledge and information about marketing activities, however, often hampers planners and policymakers in these countries in their efforts to set up appropriate development strategies. It is widely believed that, in developing countries, monopoly or usury by traders is common and the market is inefficient. The traditional, but still influential, pessimistic view is that peasants in developing countries have neither the capabilities nor the willingness to undertake commercial and industrial enterprises (Boeke 1953; Geertz 1963). Such a view often rationalizes improper government intervention in the market. Therefore, it is critical to better understand the nature, roles, and mechanisms of the marketing system. It is also important to identify possible roles for marketing agents in the process of economic development.[1]

Several important questions arise in this context. How can a marketing system be generated in the early stages of economic development? When technological and economic environments change, how is the market system transformed and how do entrepreneurs respond to the change? What kinds of entrepreneurs appear and decline? What sorts of roles can the government play in forming a modern marketing system? In order to answer

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these questions, this chapter analyzes the rice-marketing system in Japan, with special emphasis on the prewar period. ("Prewar" in this chapter refers to the era from the Meiji Restoration of 1868 to the 1930s, the beginning of the Pacific War.) Information on these issues is highly applicable to developing countries and transition economies, where market formation is critically important to economic development.

The prewar period can be divided into three phases, according to the nature and basic structure of the rice-marketing system: (1) the early Meiji period (1868 to around 1890), which was a transitional period from the traditional to the modern system; (2) the era of marketing innovation from the mid-Meiji to the Taisho period (about 1890 to the 1920s), when the structure of the marketing system for rice changed drastically in the course of modern economic growth; and (3) the Taisho to the early Showa period (1920s to 1930s), when government intervention in the market was introduced and the market was gradually suppressed. In addition, a brief investigation into the rice-marketing system of the late Tokugawa period (before 1868) may offer a useful comparison.

Overview of Prewar Japanese Agriculture

Japanese agriculture has traditionally been carried out by the peasantry and was comprised of a large number of small family farms engaged in rice farming. This tradition, inherited from the Tokugawa period (1600–1868), was retained during the period of modern economic growth after the Meiji Restoration. Throughout the postwar period, the number of farms in Japan remained roughly constant, at about 5.5 million households. The agricultural land area totaled about 6 million hectares, of which half was wet paddy fields, while the rest was cultivated upland. Accordingly, the average operational land area of each farm was very small, approximately 1 hectare.

Labor was relatively abundant and land was the major constraint on agricultural production. Efforts at agricultural development were geared to facilitate the substitution of labor for land. An intensive rice culture was nurtured under a well-developed infrastructure. A public agricultural research and extension system was established by the end of the nineteenth century. An industrial sector capable of supplying fertilizer and chemicals was also developed. Agricultural output grew at an annual compounded rate of about 1.6 percent in the late nineteenth century, which accelerated to 2.0 percent from the beginning of the twentieth century until the 1920s (Hayami and others 1991: 15–19).

Although the Meiji government attempted to catch up with Western nations through industrialization, agriculture remained a major sector in the prewar period. Primary industry accounted for about 70 percent of the labor force and about 40 percent of the net domestic product in 1880 (Hayami others 1991: 14). Gross output from rice production represented 55 percent of total farm output in 1880 (see table 2-1). Although the share of rice in total output had gradually declined to 42 percent by 1930, rice continued to be dominant in Japanese agriculture throughout the prewar period. Rice was also the

Table 2-1. Rice Production, Import, and Consumption in Prewar Japan

Year	*1880*	*1890*	*1900*	*1910*	*1920*	*1930*
Production (million yen)[a]						
Agriculture	327	398	468	584	719	767
Rice	181	209	227	270	315	323
Share of rice (percent)	55	52	48	46	44	42
Rice (thousand metric tons)[b]						
Production	5,093	5,861	6,372	7,588	8,838	9,070
Import	4	96	298	442	936	1,462
Consumption per capita (kg/year)	117	144	147	160	169	154

Note: Data refer to five-year averages.

a. Farm value, 1874–76 prices.

b. Brown rice equivalent.

Source: Japan, Ministry of Agriculture, Forestry, and Fisheries, Food Agency (1990: 448–55); Umemura and others (1966: 148–49).

most important staple in the Japanese diet. In the early 1930s, 61 percent of the daily intake of calories and 44 percent of the daily intake of protein came from rice (Kayo 1977, tables J-c-3 and J-c-4).

Until shortly after the Restoration, self-sufficiency in rice had been maintained. Accelerated population growth,[2] however, coupled with increased per capita consumption, soon forced the country to import rice. In the 1870s, annual per capita consumption was about 100 kilograms (milled rice), which increased to 130–150 kilograms by the end of the nineteenth century and peaked at 170 kilograms by the mid-1910s. Accordingly, the share of imported rice gradually increased from around 1 percent of total consumption in the late nineteenth century to about 10 percent in the 1930s (table 2-1).

In most Asian countries, farmers sell rice to traders in the form of paddy—that is, rough, unmilled rice. It is then processed into polished rice by rice mills for further marketing. The function of the rice mills is not limited to processing, but also includes storage and shipment. The rice mills thus play a key role in the marketing of rice. In contrast, in Japan the paddy is immediately husked by farm producers and sold to traders in the form of brown rice; it is stored and transported in this form. Brown rice is milled into polished rice in the final stage of marketing, generally by urban wholesalers or retailers. Thus, the major distinguishing characteristic of rice marketing in Japan is the absence of rice mills in the countryside and small towns.

It is not clear why rice marketing is done in brown rice only in Japan (as well as the Republic of Korea and Taiwan, China). Paddy stores better than brown rice, and polished rice is unsuitable for storage because it deteriorates rapidly. At the same time, paddy is much bulkier than brown or polished rice. The cool climate of Japan may have allowed brown rice to be stored or shipped without major deterioration in quality, while storage and transport capacity were conserved.

The Traditional Rice-Marketing System in Japan

The Feudal Tokugawa Period (before 1868)

In the Tokugawa period, rice occupied an overwhelmingly important position in the economy. It was not only the major staple in the Japanese diet and the most dominant crop in production, but also a major source of income for the government. Land was administered by the Tokugawa shogunate and numerous daimyo. Their financial base rested largely on the rice tax, which was levied in kind from the peasants. In principle, peasants were bound to their daimyo and to their land. Landlord-tenant relations were prohibited. Later, as intensive cultivation based on small family farms became more efficient than large farms with attached labor, a de facto landlord-tenant system was developed between legal peasants and attached laborers. This process was accelerated when the land tax system shifted from variable levies based on crop yield assessments (*kemi*) to fixed levies in kind (*jômen*), and daimyo became less eager to enforce tenancy regulations (Hayami and others 1991: 61–63).

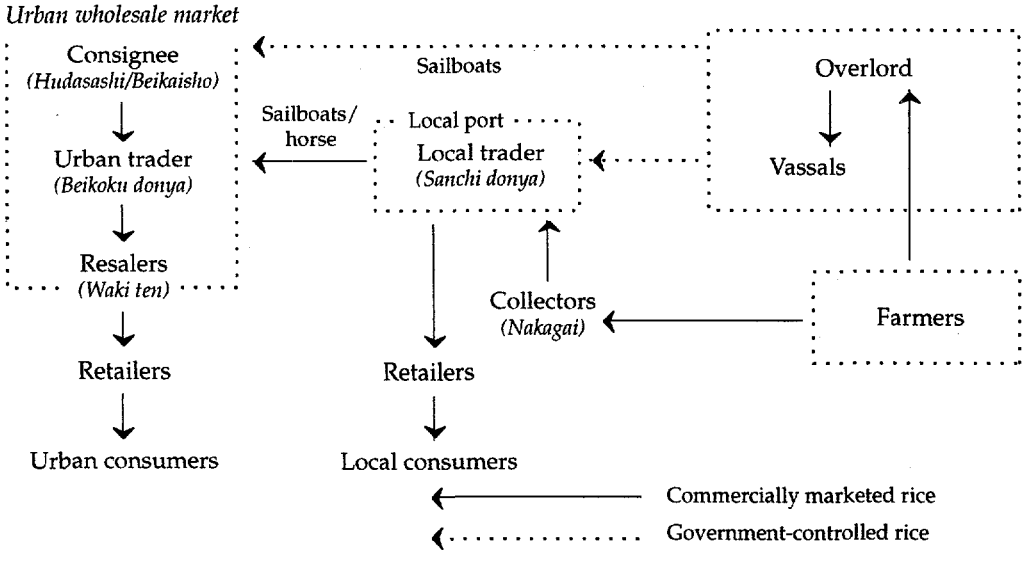
The political and military power of the daimyo was measured by the taxable capacity of the rice, known as *kokudaka*, obtained from their domains. Each daimyo had his own army, which was based in the castle town of his domain. Although the Tokugawa shogunate had some power to control the daimyo, each daimyo retained sovereignty in his domain. Communication between domains was often limited, and agricultural technologies and improved crop varieties were not easily transferred among regions. In times of crop failure, daimyo often imposed embargoes on the shipment of rice.[3] As discussed below, although urban-to-local marketing was well developed in the late Tokugawa period, the interregional marketing network did not yet function well.

Rice marketing in the late Tokugawa period was characterized by the dual structure of marketing channels (figure 2-1a). The major route was the channel for government-controlled rice. Part of the rice collected by a daimyo was paid to his retainers as in-kind salary, and the rest was sold on the market to raise cash revenue. The local markets in the daimyo's domain, however, were not always large enough to absorb the supply. Therefore, bulk shipments were sent to urban markets for sale by the daimyo or by privileged merchants. They shipped rice to selected consignees or to warehouses owned by the daimyo in the urban market.

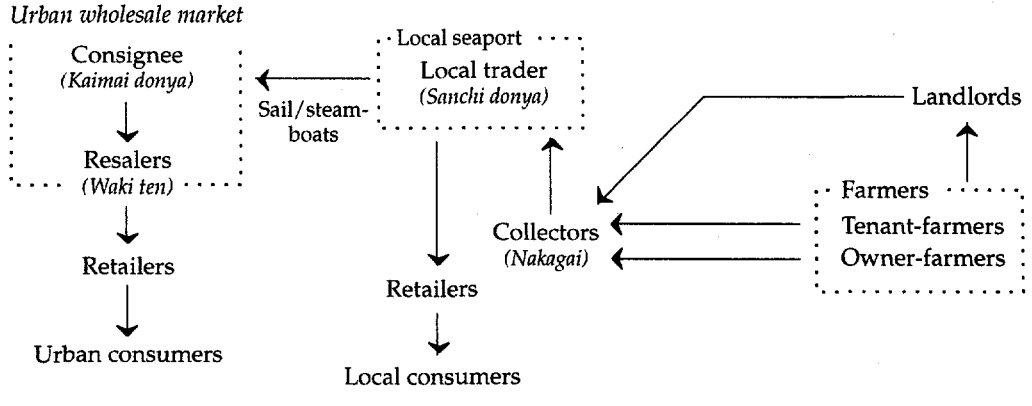
Throughout the Tokugawa period, rice production increased steadily. In 1600 the average yield of rice per hectare was 1.4 metric tons of brown rice; total production was about 3 million tons. By the end of the period, the yield had increased to about 2 tons, and total production reached 6 million tons (Nakamura 1968: 168-73; Hayami and Miyamoto 1988: 44). At the same time, rice tax rates and the taxable standard of the rice yield changed only gradually, especially after fixed levies in kind were imposed. As a result, peasants could retain the increase in production, which enabled them to sell rice through commercial channels. Part of the rice sold by peasants was consumed locally and part was shipped to urban markets by local traders.

Figure 2-1. The Traditional Rice-Marketing System in Japan

(a) The Late Tokugawa Period (before 1868)



(b) The Early Meiji Period (1868 to around 1890)



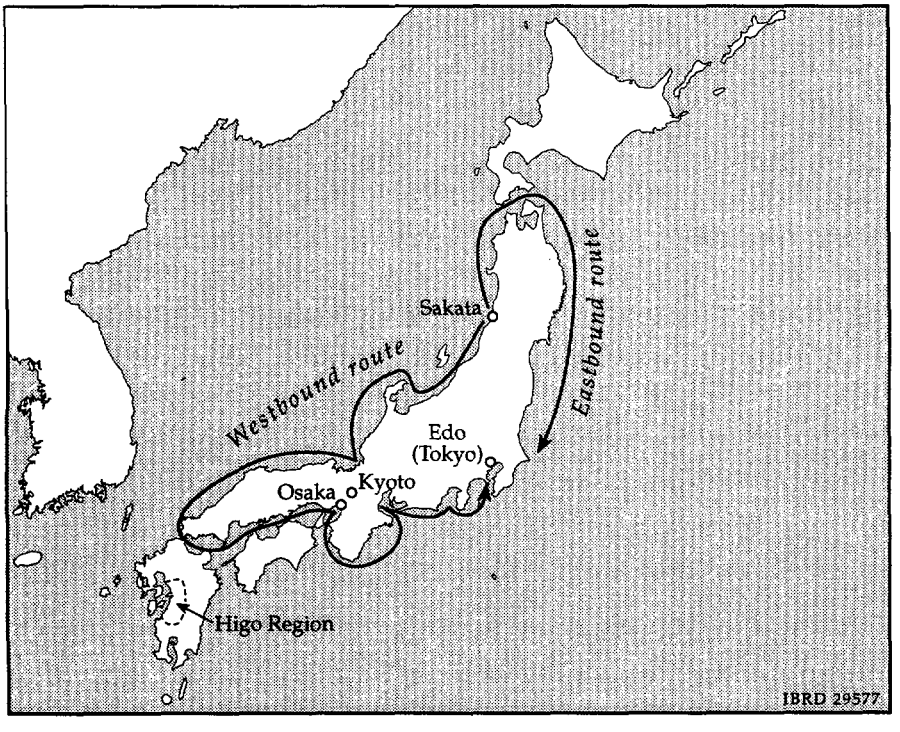
Although few quantitative data are available at the national level on rice production and distribution in this period, we can draw a conjectural sketch (Miyamoto 1988: 20–25).[4] In the early nineteenth century, the total population of Japan was 31 million; 85 percent were members of the peasantry and 6 percent belonged to the warrior class. Rice production was 27 million *koku* (about 4 million metric tons in brown rice), of which 27 percent, 7.2 million *koku*, was collected by daimyo as rice taxes.[5] They consumed 2.2 million *koku*, and the rest was sold to city dwellers through commercial channels. The peasants con-

sumed around 18 million *koku* and supplied 1.4 million *koku* to consumers through private marketing channels. Thus, after deducting 1.4 million *koku* for marketing and postharvest losses, the total amount of commercially marketed rice was estimated to be 5 million *koku*, or around 18 percent of total production. It should be noted that this 18 percent share shows the lower bounds; it is assumed that warriors and peasants did not purchase rice from the market.

Rice was normally shipped in large sailing vessels with capacities of at least 300 to 500 *koku*.[6] Coastal transportation by chartered vessels required full loads of rice, which only large traders could afford. It was a slow and risky operation—rice often deteriorated in quality, and there was a chance that prices might decline before the destination was reached. The risk of shipwreck was also high.[7] Long-distance land transportation, however, which allowed only 2 bags (=120kg) of rice to be carried on each pack animal, was prohibitively costly because of poor road conditions.

Let us consider, for example, the route for rice shipped from Sakata. One of the major ports in northern Japan, Sakata was a marketing center for rice produced in the Shonai plains and other neighboring regions. Rice collected in Sakata was transported by boat to Osaka by the westbound coastal route. It was then shipped to Edo, which took more than two months (see figure 2-2) (Yamagata-ken Sanmai Kairyô Kyôkai Rengôkai 1958: 6). The eastbound route was also occasionally used, but it involved a higher risk of shipwreck.

Figure 2-2. Major Cities and Coastal Transportation Routes for Rice from Sakata to Osaka/Edo in the Late Tokugawa Period



The strong economies of scale and the high risk of transport by ship were critical factors in the organizational structure of the rice-marketing system in this period. It was an efficient system, given the prevailing physical and economic environments. Bulk shipment by the daimyo or their agents, who were large merchants with sufficient financial resources to take the risk, was considered an efficient system that minimized the costs under the resource constraints of the time (Miyamoto 1988: 436).

The Transitional Period (1868 to about 1890)

After 1868 the new Meiji government dismantled the system of feudal daimyo and built a new, centralized administrative system. Drastic institutional reforms were adopted by the Meiji government. The traditional rice tax was replaced by a modern land tax based on land value and paid in cash, and interprovincial trade and communication were expanded. The reforms caused significant changes in local and interregional marketing systems. In the early Meiji period, however, the marketing system for rice remained largely the same as that inherited from the Tokugawa period (Mochida 1970).

The rice-marketing channels in this period are shown in figure 2-1b. The medium of marketing was still characterized by large shipments on sailing vessels, although they were soon replaced by steamships. Local traders shipped rice in bulk to certain consignees in urban wholesale markets. Steamships sped up the operation and decreased the risk, but it was still an uncertain effort. Deterioration in the quality of the rice and the loss caused by unforeseeable price declines at the destination were still factors. All risk in the transaction was borne by the large merchants in the local port cities, while the consignees in the urban markets sold rice on commission. Therefore, fixed and long-term relationships were maintained between local traders and consignees in order to minimize the moral hazard of consignee cheating.

Changes in the marketing system in the early Meiji period were caused by the shift in the land tax system. Because agriculture was the most important source of national revenue, the Meiji government implemented a land tax reform (*Chiso Kaisei*) in 1873. Under the modern land tax system based on land value, landowners, mostly farmers, had to sell their rice locally in order to pay the tax in cash. Thus, village-based marketing was developed. The role of large local traders (*sanchi donya*) at local ports, who could bear high risk and mobilize substantial working capital, became critical in the shipment of rice to urban markets.

During the Tokugawa period, the development of local markets varied among the domains. For example, in Sakata domain, the government promoted the activities of private merchants, and the interregional trade of rice was handled extensively by these private traders. As a result, the Sakata port was a local marketing center for this domain, as well as for neighboring domains. In Mori domain, the government built depots at the port and provided low-interest loans to traders who shipped merchandise through these depots (Suzuki 1941: 47).

In these provinces, local markets were well developed and local traders could thus manage the rapid expansion in the market supply of rice brought about by institutional change;

that is, the tax reform in the early Meiji period. In contrast, before the Meiji Restoration, in Sendai domain the shipment of rice to urban areas was handled solely by state trading and few private merchants were activated. Therefore, after the Meiji Restoration, local agents had insufficient capacity to handle the new commercialization of rice, and the local market in Sendai was in disarray.

Marketing Innovation in Modern Economic Development

The Meiji Restoration of 1868 brought about major institutional reforms. The new, centralized administrative system removed communication barriers among the regions. The land tax reform forced farmers to sell their rice to local markets, which enhanced commercialization. The activities of local collectors were promoted through this process. Institutional reform; however, did not necessarily induce marketing innovation. In the early Meiji period, marketing relied on the infrastructure inherited from the Tokugawa era. Marketing innovations occurred with innovation in infrastructure in the mid-Meiji period. Thus, institutional reform was a necessary condition—but not a sufficient condition—for marketing innovation. Let us now examine the process of institutional change in marketing in relation to innovation in infrastructure.

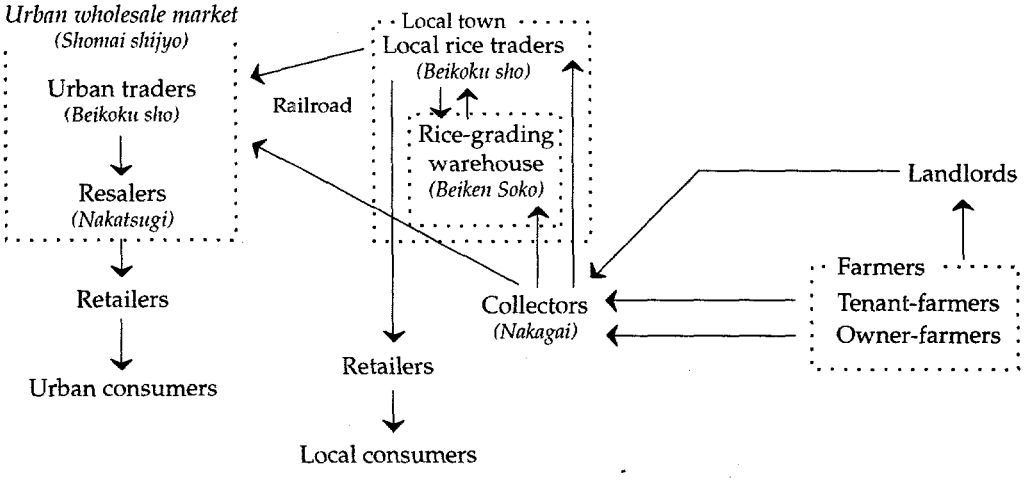
The Period of Marketing Innovation (1890 to the 1920s)

Toward the end of the nineteenth century, the structure of the marketing system for rice changed markedly in the course of modern economic growth. It was a period of institutional innovation and development of the marketing system. New marketing institutions emerged outside the traditional market channels controlled by privileged merchants. Government intervention in the market was limited.[8] Locally segmented markets were integrated into a nationwide market. Two major underlying factors affected the organizational structure of the rice-marketing system.

First, the network of railroads was extended to local areas. Rice transport shifted from ships to railroads, bringing change in marketing channels, as well as in the characteristics of marketing agents and the mode of transactions. Second, through severe competition among rice-producing areas, quality controls for rice were enhanced by qualitative and quantitative standards (*san-mai kairyô*) in each region. This resulted in reductions in transaction costs and in the risk involved in long-distance transport.

After about 1890, changes in the technological environment led to a transformation of the organizational structure of marketing (figure 2-3). The railroad network was quickly extended to local areas throughout the period. The Japanese railroad system began in 1872 with 29 kilometers of track between Tokyo and Yokohama. It was extended to 2,200 kilometers in 1890, 6,000 kilometers in 1900, and exceeded 20,000 kilometers in the mid-1920s. Rolling-stock kilometers—the distance between railroad stations multiplied by the num-

Figure 2-3. The Modern Rice-Marketing System in the Mid-Meiji to Taisho Period



ber of freight cars that pass—increased from 18 million kilometers in 1890 to more than 2 billion kilometers in the 1920s (Minami 1965: 204–5).

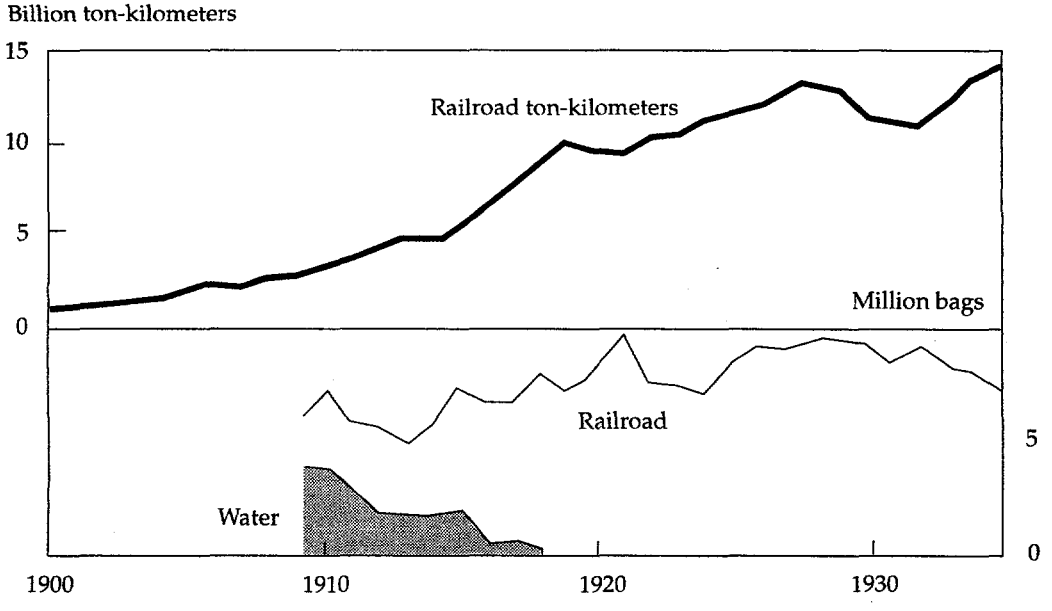
In 1910 less than half the rice arriving at the Tokyo wholesale market was shipped by rail (figure 2-4), but the share of railroad transportation increased to almost 99 percent by the end of the Taisho period (1926) (Tokyo Kaimai Donya Kumiai 1937: 271–74). Although railroads were owned by the state, there was no evidence that monopolistic pricing was applied to the freight of rice (Kimura 1936, chapter 3). There were several advantages to railroad transportation: loss during loading and unloading was reduced, transportation time was much shorter, and loading was easy (Japan, Ministry of Railroads 1925: 391–92).

In addition to these direct advantages, the shift to railroad transportation brought about many changes that led to marketing innovations, including changes in marketing channels and their structure, mode of transportation, and the risk involved in marketing rice. Two marketing channels, traditional water transportation and modern railroads, are described in figure 2-5.

MARKETING CHANNELS AND THEIR STRUCTURE. As marketing channels shifted to the railroad lines and each railroad station became a local marketing center, the local coastal and river ports lost their importance as marketing centers. These changes can be seen as analogous to computer networks. If we consider traditional marketing channels as hierarchical networks under mainframe host computers, then the modern marketing channels connected by railroads were a peer-to-peer LAN system comprised of many small workstations.

In the traditional system, rice produced in a village was carted to a nearby rural marketing center on a riverbank, then loaded into a small riverboat and transported to a large

Figure 2-4. Extension of the Railroad and Shipment of Rice to the Tokyo Market



Source: Minami (1965: table 12), Tokyo Kaimai Donya Kumiai (1937).

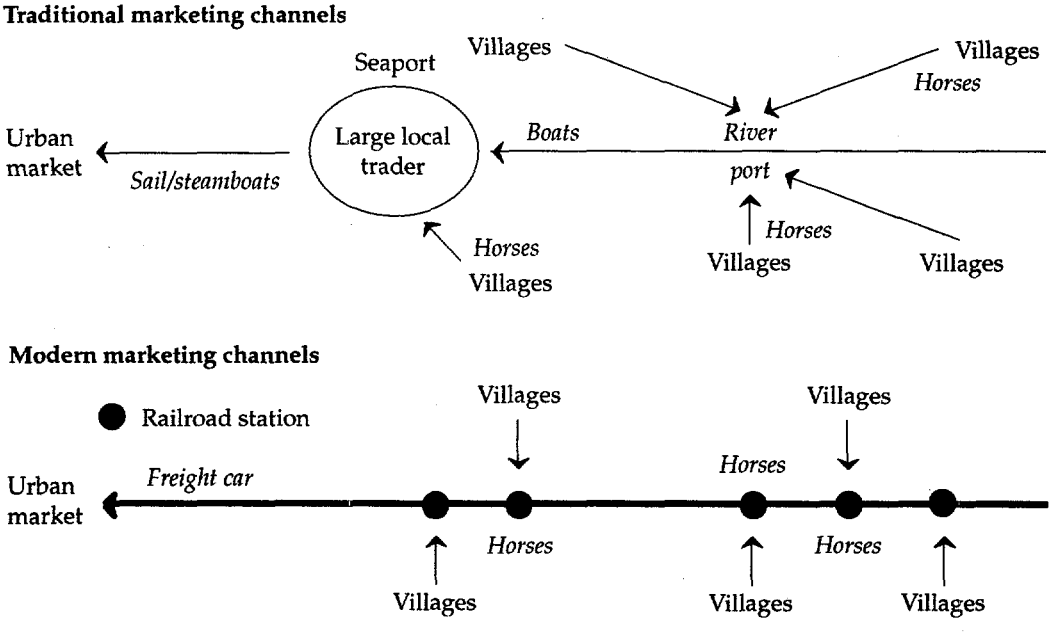
local trader at a seaport. Large local traders collected sufficient amounts of rice to send on to urban markets by boat. Thus, local markets were connected to urban markets only through local traders who served as local hubs for marketing. The role of riverports was limited to their use as transit points for transshipments. Under the modern system, local marketing centers were decentralized. Each railroad station was connected directly to urban markets by rail and became a local marketing center. Furthermore, the extended railroad network enabled each region to be connected with other regions, and marketing among local regions became easier.

Mode of Transportation. Economies of scale in transportation were reduced under the modern system. The minimum unit of transactions was significantly reduced—the 500 *koku* (about 75 metric tons of brown rice) required for a shipment by boat was replaced by 40 *koku* (6 tons), the maximum needed to fill a single freight car (Suzuki 1941: 96). Freight trains were serviced frequently, and the traders could easily arrange their transshipments. Thus, economies of scale in transportation became much smaller. Small traders with limited financial capacities could engage in local-to-urban shipments under the modern system.

RISK INVOLVED IN RICE MARKETING. The high risk of transactions—price risk, quantity loss, and quality deterioration—was another critical factor that characterized the organizational structure of the traditional system. With railroad transportation, the time for long-distance transport was significantly reduced. Once rice was loaded onto freight cars at a local railroad station, it was sent directly to an urban station without further transshipment and reached its destination within a few days. Quantity loss or quality deterioration, which was inevitable in lengthy transportation and frequent transshipments, could be avoided. The price risk was reduced, because the price fluctuation at the urban market within a few days was unlikely to be critical, while more distant future prices (beyond a few months) could not be foreseen. Risks that had been inevitable under the traditional system were thus reduced.

Because consideration of economies of scale in transportation disappeared and related risks were drastically reduced with railroad transportation, large traders at local ports lost their comparative advantage and declined in importance. Small traders were able to engage in rice marketing with small shipments from many small local marketing centers. Under the traditional system, the important ability was the capacity to mobilize large amounts of capital and coordinate many agents to collect merchandise for large shipments. Under the modern system, this ability was no longer critical; the ability to respond to market conditions in urban and local markets became more important. Thus, the characteristics required for marketing agents changed.

Figure 2-5. Changes in Marketing Channels Induced by Innovation in Infrastructure: Railroads



Standardization of Rice

Under the modern system, local-to-urban and local-to-local marketing were more strongly integrated by railroads. The size of the integrated commercial market grew, and the share of shipped merchandise in each region increased. Integration of the local and urban markets into a nationwide market reduced interregional differences in rice prices.[9] In 1880 the coefficient of variation (CV) of local rice prices over the prefectures was 13.3, which declined to 4.5 in 1910.[10] A number of reasons caused the decline of the CV, including the extension of the railroad and telegraph networks and nationwide standardization of rice varieties and qualities. The values of CV and the total rail distance showed a high negative correlation of –0.85 over the last three decades of the Meiji period.

In the Higo region (see figure 2-1), the share of rice exported to other regions increased sharply throughout the prewar period (table 2-2). Before the spread of the railroads in this region, only 8 percent of rice was exported to other regions, but the export share increased with the extension of the railroad. Just after the opening of a tunnel that connected Kyushu to the main island, Honshu, in 1911, the share of exported rice reached 40 percent of total production. Through the process of market integration, competition among rice-producing regions was strengthened, and market competition induced innovation in agricultural production and marketing.

Another innovation in marketing and agricultural production was standardization, including improvement in the quality of rice (*san-mai kairyô*) brought about by increased competition and expanding market size. It reduced transaction costs and the possible risks of marketing. Groups of progressive farmers, landlords, and traders and farmers' associations (*nôkai*) played important roles in improving the quality of rice. Rice-grading warehouses (*beiken sôko*) established local standards for marketed rice.

With severe competition among the rice-producing regions, the quality of the rice from a given region directly reflected its price in the urban market. Standardization also af-

Table 2-2. Production and Export of Rice in the Higo Region
(thousand metric tons)

Year	*Production (A)*	*Export (B)*	*Export ratio (B/A)*	*Railroad extended*
1887	157	12	0.08	
1893	141	23	0.17	Kumamoto (1892)
1897	188	43	0.23	Yatsushiro (1896)
1902	185	59	0.32	
1907	228	82	0.36	Hitoyoshi (1907)
1913	227	90	0.40	Shimonoseki-moji connected by tunnel to Honshu (1911)

Note: Higo is currently Kumamoto Prefecture on Kyushu. Data refer to three-year averages, except 1893 and 1913. 1892 = 1893–94 average. 1913 = 1912–13 average.

Source: Japan, Ministry of Railroads (1916: 691–92).

fected price. Not only better quality, but also standardized and stable quality ensured higher prices in urban markets. Efforts were made to improve and control the quality of rice in many rice-producing regions. Postharvest controls, such as drying, husking, and packing, were enhanced. Improved technologies for postharvest processing were developed and producers were encouraged to adopt them. De facto qualitative and quantitative standards were established locally in each region.

As early as the 1880s, groups of farmers, landlords, and traders took the initiative in improving the quality of rice in various regions.[11] Around 1900, these voluntary efforts were transformed into official regulations by local governments. For example, in Yamagata Prefecture, the local government introduced an ordinance on the paddy-drying standard based on recommendations from the farmers' associations in 1907. Many farmers' associations paid subsidies to farmers for improving postharvest controls on rice. The local government also set standards for the packaging of rice shipped to other regions (Yamagata-ken Sanmai Kairyô Kyôkai Rengôkai 1958: 380–418).

Rice-grading warehouses (*beiken sôko*) were rice-marketing institutions and issued rice exchange notes (*beiken*). They were managed by private companies or cooperatives and built in the mid- to late Meiji period. In 1910 there were thirty-three *beiken sôko* in the country (Suzuki 1941: 137–38). Their function was not limited to storage but also included grading and standardization of rice. A *beiken sôko* normally had three sections: inspection/grading, repackaging, and storage. A financial section was also included, or the warehouse cooperated with commercial banks. Since they issued rice exchange notes, a form of bill of exchange, finance was a critical function in the warehouses.

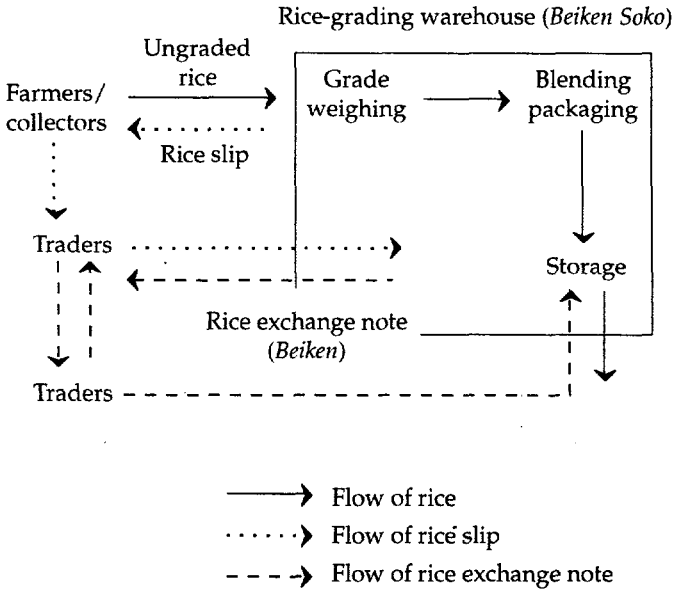
Because a *beiken sôko* had to maintain large storage facilities, the operation involved economies of scale. Moreover, because of strong competition among the regions, it could not be profitable unless it could collect a large volume of rice. Many attempts to build *beiken sôko* failed because they could not collect a sufficient amount of rice. Warehouses that could not establish cooperation with commercial banks were not sustainable.

The Sankyo (*beiken*) *sôko* in Sakata, Yamagata Prefecture, was one of the most successful warehouses and had an excellent reputation. It was attached to the Sakata rice auction market, which was formally reorganized in 1893.[12] It used storage facilities from the warehouse owned by the daimyo in Sakata. The former daimyo and the Honma family, a very large landlord, supported the warehouse, which ensured its reliability.

The major functions of *beiken sôko* are shown in figure 2-6. Farmers and collectors brought ungraded rice to the warehouse, which inspected and graded the rice and issued a rice slip indicating the grade, volume, and date of receipt. The minimum unit of accepted volume was one *go* (180 cubic centimeters). The warehouse unpacked the rice, mixed it for each grade, and packed it into standard packages. Each package was set to contain 4 *to* (60 kilograms) of brown rice. Through this process, quantity and quality were standardized for each grade. Better storage facilities ensured a stable quality over the seasons. Thus, the warehouse could supply rice of consistent, standard quality.

The warehouses prompted innovations in marketing as well as finance. The warehouse issued a rice exchange note in exchange for rice slips when the total volume of the rice

Figure 2-6. Functions of *Beiken Soko* (Rice-Grading Houses)



specified on the slips reached 10 *koku* (1.5 metric tons) or more for each grade. The rice exchange note was transferable, and its holder could receive the prescribed amount of rice in exchange for the note, plus storage and handling fees. These fees were a major source of income for the warehouses. The rice exchange notes were also used as collateral for bank loans or in pawn shops.

Transactions between traders were completed by exchanging these notes. Small-scale transactions between farmers or collectors and traders were done with rice slips, since they were also transferable. Landlords preferred to receive rent from tenant farmers in the form of rice slips rather than in-kind payments of rice. Transactions by rice exchange notes provided important advantages for marketing agents. Traders and landlords did not need storage facilities, nor did they need to move rice for each transaction, which greatly reduced marketing costs. Warehouses provided standardized rice, and thus marketing agents did not need to inspect the quality of the rice. Instead, they could purchase the desired rice by referring to the brand, grade, and number of bags. Transaction costs for marketing were also reduced, and because the notes could be used as collateral, capital constraints were eased for marketing agents.

Quality controls and standardization had a great impact on marketing and agricultural production. Once a local standard was established, transactions in the markets could be done by referring to a brand name. Although local standards could not be established in all regions, rice from regions that were successful with standardization was used as a standard in urban wholesale markets, and its price was higher than for rice from other

regions. It should be noted that the success in rice quality improvement and *beiken sôko* was achieved by the initiatives of rural-based entrepreneurs, such as groups of progressive farmers and rice traders.

The Role of Rural Entrepreneurs

Village-Level Marketing

Throughout the Tokugawa period, increased rice yields enabled peasants to diversify into a variety of cash crops. In advanced areas, such as on the outskirts of Osaka and Kyoto (the Kinai region), many peasants took advantage of this diversification. Rural-based cottage industries also became pervasive in these areas. In the seventeenth century, regional specialization progressed.[13] For example, of the merchandise produced in the country nearly 40 percent of the items (706 of 1,807 items) were produced primarily in the Kinai area (Miyamoto 1988: 39), while remote areas specialized in the production of rice and other staple crops. Interregional specialization was supported by interregional marketing. Specialization or diversification in agricultural production enabled rural entrepreneurs to act as marketing agents. Many merchants emerged from the peasantry in advanced areas to become competitors to the privileged merchants who were given monopoly licenses by daimyo in the trade of rice and other major commodities.

In the Meiji and Taisho periods, rice marketing at the village level was carried out by small collectors (*nakagai*). They collected rice directly from farmers and landlords and delivered it to local traders or rice-grading warehouses in nearby towns (see figures 2-2 and 2-3). Most of these activities were taken on by peasants as side jobs. They shipped rice on commission or traded on their own. Landlords and large farmers often sold rice to large traders in local towns through these small collectors. The collectors also purchased rice for cash from producers and sold it to large local traders. Because they purchased ungraded rice at the farms, the ability to identify the quality of rice and foresee market prices was crucial for their activities.

One farmer in Yamagata Prefecture, Zenji, recorded his daily activities in his diary,[14] which covered over forty-two years, from 1893 to 1934. He acted as a collector while also engaging in rice farming. In the peak year of his activity as a collector, in 1916, he purchased 603 bags[15] of rice from 90 farmers in 18 nearby hamlets. He also took an additional 293 bags for transportation on commission. In that year, he handled 1,067 bags of rice, including 171 bags of his own rice (Toyohara 1976: 169-73). He sold it to local traders or delivered it to *beiken sôko* in Sakata. Transportation was by a horse-drawn wagon or sled, each of which could carry eight to thirteen bags. He earned ¥130 for this operation during the year. At that time, the value of 1 *tan* (0.1 hectares) was ¥350 to ¥400 (Toyohara 1976: 184). When he married in 1904, his family cultivated 1.2 hectares of owned land and 0.9 hectares of rented land, which was typical for an owner/tenant-farmer in the region. His activities as a collector enabled him to earn sufficient income to expand his landholdings.

In the early 1920s, his operation was expanded to 1.6 hectares of owned land and 1.9 hectares of rented land. He also became the owner of 6 hectares of forest and 0.08 hectares of tenanted land (Toyohara 1976: 16, 18). His profitable operation as a collector, however, did not mean that he could exploit monopsonistic profit. He made his fortune from his extraordinary hard work and entrepreneurial ability. It should also be pointed out that nearly perfect information on prices in the urban and local town markets was available in the village. Farm producers had the alternative of selling their products to one of these village traders or selling directly to town traders nearby. Therefore, there was little room for traders' monopsony (Kimura 1936: chapter 3).

According to Zenji's diary, there were at least one or two collectors in each hamlet. Their activities were stimulated by the land tax reform in the early Meiji period. In order to pay the land tax in cash, it became necessary for farmers to sell rice in the market. Zenji is representative of many peasant entrepreneurs who participated in marketing activities in response to new profit opportunities created by the modern institutional reforms of the Meiji period.

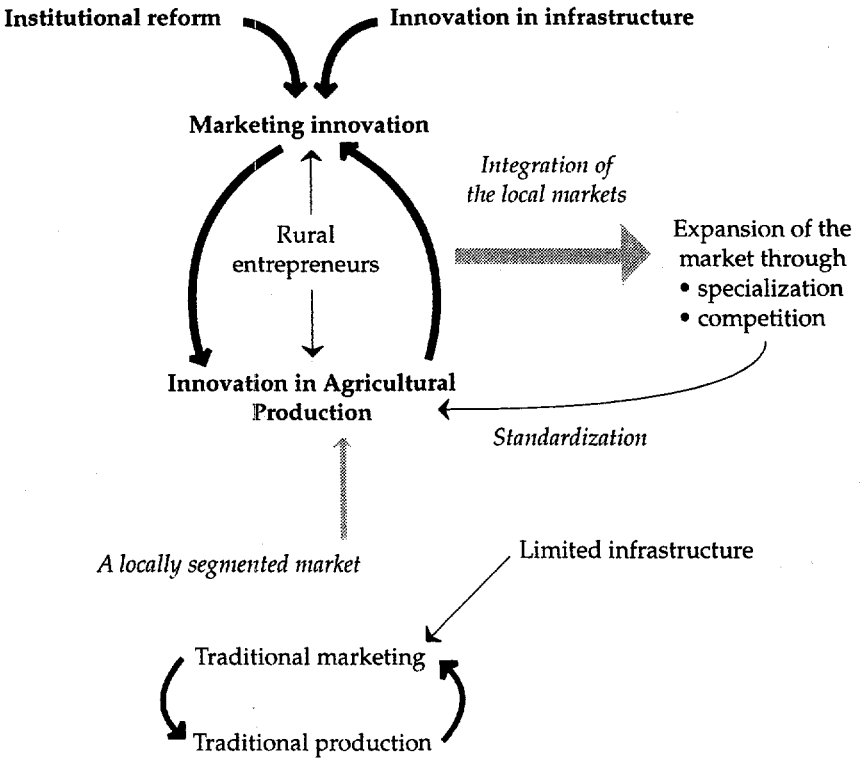
The Origins of Rural Entrepreneurs

In a traditional subsistence-oriented economy, where peasants cultivate traditional crops in traditional ways, the marketable surplus of farm produce is limited. The market is segmented by limited infrastructure. Under these circumstances, there is little opportunity for entrepreneurs to emerge from the peasantry to play an important part in marketing (figure 2-7).

When innovation in agricultural production is initiated, the marketable surplus of farm produce increases, which provides a marketing opportunity for rural entrepreneurs. Improved infrastructure enables them to engage in interregional marketing, resulting in the integration of segmented markets into a large regional or national market. If marketing is activated, this, in turn, stimulates innovations in farm production. The integration of markets enables a region to specialize in the production of products in which it has comparative advantage. Interregional competition in the market leads to institutional innovations in marketing. Efforts toward quality improvement and standardization of products become necessary for each region to gain a share of the expanded market. As a result, marketing efficiency is improved, as observed in prewar Japan. A similar process was observed in corn and cotton production and marketing in the United States in the nineteenth century (Chandler 1977). The process involves the mutual reinforcement of innovations between agricultural production and marketing.

In a region of Java where traditional upland crops and rain-fed rice were produced, the introduction of a new cash crop, vegetables, created new marketing channels to the urban center (Hayami and Kawagoe 1993: 111–34). Establishment of the new marketing channels enhanced vegetable production in the region and vice versa. We should note that the marketing of vegetables in this case was done by rural-based traders from the peasant class. In the late Tokugawa period in Japan, diversification in agricultural production also

Figure 2-7. Role of Rural Entrepreneurs in Marketing Innovation



enabled rural entrepreneurs to act as marketing agents and to gradually grow to be competitors of the privileged feudal merchants based in castle towns.

A question now arises. In what segment of rural society do rural entrepreneurs originate? One possible source may be landlords. A widely accepted view asserts that the landlords had overwhelming power to control tenants as landowners, traders, and moneylenders. If this view is correct, it implies that landlords played an important role as entrepreneurs in rural marketing. Their role in local marketing in Japan, however, does not seem to have been vital. According to a survey conducted by the Ministry of Agriculture and Commerce in 1925, there were 3,176 landlords who owned more than 50 hectares of farmland.[16] Among them, only 358 (11 percent) engaged in commerce (table 2-3). More than one-third engaged in farming, while another third who did not engage in economic activities other than rent collection may be legitimately called "parasitic landlords" (Tobata 1936: 78–87).

Although the data are too limited to draw firm conclusions, Zenji's case and the case of vegetable marketing in Java suggest that it is highly possible that rural entrepreneurs are not limited to the landlord class, but that they can emerge from the peasantry when profitable opportunities become available.

Table 2-3. Occupations of Landlords Holding More than 50 Hectares of Farmland, 1925

Occupation	*Number*	*Percentage*
Farming	1,122	35
None	952	30
Commerce	358	11
Official/office worker/director	206	6
Moneylender	147	5
Winery	147	5
Mining/forestry/fishery	56	2
Other	46	1
Subtotal	3,034	95
Owned by corporation	145	5
Total	3,179	100

Source: Japan, Ministry of Agriculture and Commerce (1925: 691–92).

Government and Farmers' Cooperatives

In order to consider the government's role and the functions of farmers' cooperatives in marketing, an examination of the rice-marketing system during wartime Japan is needed. Rice marketing during World War II showed a process of market distortion and suppression of entrepreneurship caused by heavy government intervention in the market.

Government Regulation in the Wartime Economy (1920s–30s)

The Taisho to the early Showa period covers the interwar period from the 1920s to the 1930s. These years were characterized by government intervention in the market, which was introduced in the early 1920s and gradually increased throughout the period. The activities of private marketing agents were suppressed and marketing functions were replaced by farmers' cooperatives, and market mechanisms were neglected. Two factors affected the marketing system. The first was direct government intervention in the market. The second was the government's promotion of farmers' cooperatives.

Inflation during World War I caused the domestic rice price to more than double. The poor were hard pressed, and a rice riot broke out in 1918. The mob demanded rice and attacked rice stores and landlords' depots. The military was called out to suppress the riots, which became the turning point in the government's attitude toward the rice market. When the war ended, the prices of farm products were depressed by the postwar recession. The government began to intervene in the rice market under these economic and social conditions. In 1921 a rice law was enacted. Under this law, the government

established a permanent system designed to regulate rice supply through the purchase and release rice, as circumstances required.

Following the return to the gold standard in 1930 at pre–World War I parity, the Japanese economy was severely depressed, and there was a serious agricultural crisis. Although farm prices had already declined more than 20 percent in the late 1920s, they dropped an additional 30 percent during the next two years (Kawagoe 1993: 185). In response, the rice law was revised on several occasions. In the revision of 1931, a license system for rice import and export and a system that permitted the government to purchase or release rice at floor/ceiling prices were introduced. In the following year, it was arranged that the floor/ceiling prices would be calculated based on farm household expenses and production costs. Monopolistic power was given to the government to import and export rice. In 1933, the rice law was superseded by a rice control law, which introduced a system permitting the government to purchase and release rice in an unlimited manner within the floor/ceiling prices.

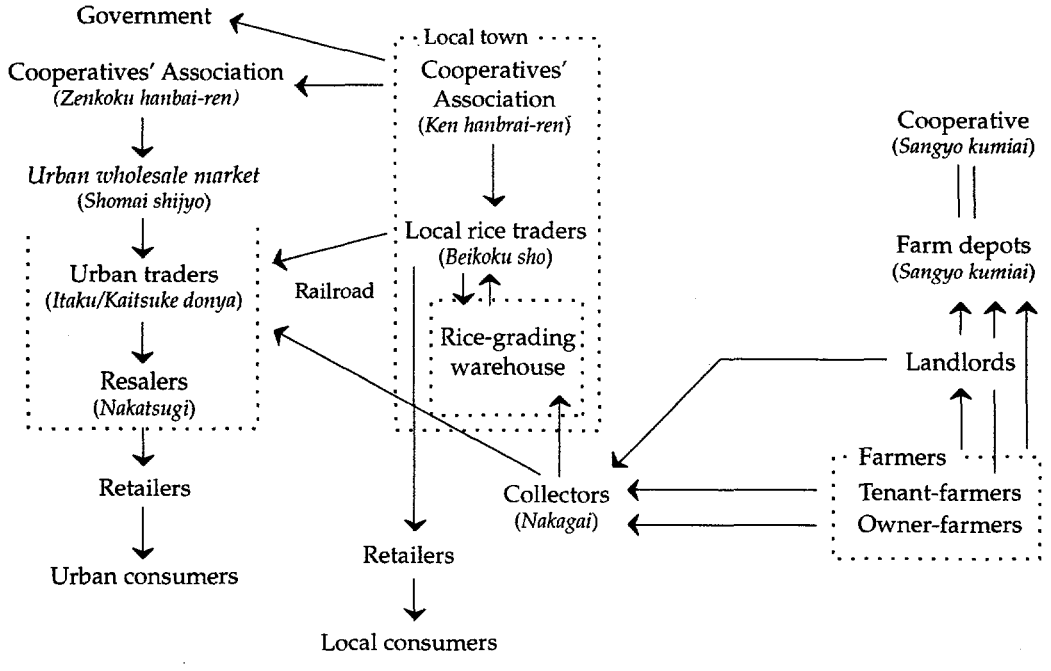
Government intervention in the market gradually increased. It was initially intended to bring about price stability, but later intervention turned into rigid economic control, while the market mechanism was slowly suppressed, and domestic rice supply fell increasingly short of demand. At the same time, farmers' cooperatives were promoted under a government policy of protecting agriculture and rural society.

Farmers' Cooperatives

There has been a myth that farmers' cooperatives could be a strong countermeasure against traders' monopsony. Many developing countries have thus tried to promote farmers' cooperatives as marketing agents. Of course, the functions of farmers' cooperatives are not limited to marketing. They could provide a variety of services to farmers, such as the exchange of farming knowledge, mutual crop insurance, the extension of new technologies and education, or officially supported loans. If the market is competitive, however, as observed in the rice market in prewar Japan, there is no economic rationale to form cooperatives focused on marketing.[17]

The story in the 1920s and 1930s tells us that government-guided farmers' cooperatives lacked entrepreneurship as marketing agents. The government promoted the establishment of farmers' cooperatives. In marketing activities, subsidies were provided to build farm depots (*nôgyô sôko*) managed by the farmers' cooperatives. The depots were facilities for the assembly, joint storage, and shipping of farm produce. In 1931 the Japan Federation of Rice Trading was established as the central organization of farmers' cooperatives for the sale and purchase of farm produce and raw materials. Farm depots numbered about 1,000 in 1921, and substantially increased to 5,000–6,000 by the late 1930s. We should note, however, that the dominance of the farmers' cooperatives in the marketing in this period does not imply their competence as entrepreneurs. Instead, the government policy that gave priority and privileges to cooperatives, while suppressing the activities of traders, resulted in the decline of traders and the dominance of farmers'

Figure 2-8. Rice Marketing under Government Control in Japan: Taisho to Early Showa Period (1920s to 1930s)



cooperatives. The farm depots were given priority over private traders in collecting rice for the government (figure 2-8).

The marketing channels of farmers' cooperatives were inefficient compared with those of private traders. For example, a farm depot in Yamagata Prefecture reported that it sold rice to traders in Tokyo, not to its central organization in Tokyo, because the latter was slow to respond and offered lower prices (Yamagata-ken Sanmai Kairyô Rengô kai 1958: 28–29). Because of inexperienced administration and bureaucratic delays in operations, cooperatives could not provide services that were as good or as flexible as those of private traders.[18] Similar inefficiencies have also been observed in the operations of farmers' cooperatives in Indonesia (Mears 1981: 133–37; Kawagoe, Ohkama, and Bayo 1992). After the war, farmers' cooperatives played an important role in the marketing of government-controlled rice. The functions of the marketing institutions, rice policies, and the role of private marketing agents were different from those seen in the prewar period. There was little functioning of the market mechanism and little room for entrepreneurs to play active roles in the marketing of rice.

Rice marketing in the postwar period has been strictly regulated. It has resulted in the overproduction of rice, huge financial deficits, inefficient production, and rent-seeking by marketing agents.[19] The rice market in postwar Japan was a clear example of market distortion created by government intervention.[20]

Conclusions

Summary

Before World War I, rice-marketing activities in Japan were undertaken by numerous private traders. The market generally operated under free competition, and government intervention was limited. In the course of modern economic growth in the Meiji period, the marketing system of rice changed drastically in structure.

Institutional reform—that is, land-tax reform—promoted the activities of rural-based marketing agents. The railroad network was extended to local areas by the mid-Meiji period. The shift from water to land transportation brought a major change in marketing channels through reductions in economies of scale in transportation and reduced marketing risk.

The market was expanded significantly through the integration of hitherto segmented local markets. Market integration enhanced competition among rice-producing areas. Through severe competition, quality controls on rice were promoted by the initiative of rural-based entrepreneurs, including progressive farmers and rice traders, and qualitative and quantitative standards were established in each region. Rice-grading warehouses were developed as the key institution to establish standards and facilitate finance for marketing.

The establishment of local standards, coupled with the extended telegraph network, enabled marketing agents to transact their business more easily by utilizing local brand names and grades. Transaction costs and the risks associated with rice marketing were greatly reduced by this institutional innovation. We should note that these marketing innovations were initiated by rural entrepreneurs who originated not only from the landlord class, but also from among the peasantry. The findings present strong counterevidence to the traditional view that peasants in developing countries have neither the capabilities nor the willingness to undertake commercial and industrial enterprises.

Policy Implications

Local marketing systems in developing economies are often regarded as inefficient and imperfect. Some views, such as traders' monopoly and usury, often rationalize government intervention in the market. The case of postwar Japan, however, indicates that improper government intervention is a source of market distortion and inefficiency.

We should note that the dynamic changes in the marketing system of prewar Japan took place when the market was under free competition and government intervention was limited. Entrepreneurs emerged from the rural population and played a key role in creating a modern marketing system—even standardization and grading were promoted at the local level through the initiative of rural entrepreneurs. Entrepreneurship is not unique to a certain social or ethnic group, but can emerge from the peasantry if market opportunities are available.

Nevertheless, this does not mean that government should not do anything in the marketing sector. Marketing innovations can be initiated and accelerated by improvements in

infrastructure. Therefore, public investment and deregulation that encourage the establishment of infrastructure—such as railroads, roads, and telecommunication networks—are critically important.

Government efforts to support innovation in agricultural production are also vital to marketing innovation. Changes in the marketing system lead to changes in agricultural production and vice versa. Therefore, research and extension in agricultural production, including the introduction of new marketable crops, are also important and are promising areas for effective government initiative.

The standardization of agricultural commodities greatly reduces their marketing cost. Introduction of a unilateral official standard designed by bureaucrats, however, often hampers the natural development of the market. Careful observations of whether any de facto local standards are informally adopted by marketing agents will be important in the determination of useful official standards for commodities.

Notes

1. Although the term "marketing" describes a wide range of activities, the major focus of this chapter is rice-distribution systems, from producers to the urban wholesale market.

2. The annual average population growth rate in the prewar period (1885–1940) was 1.2 percent, while that in the latter half of the Tokugawa era (1730–1872) was 0.02 percent (Ohkawa, Shinohara, and Umemura, eds., Vol. 2; Hayami and Miyamoto 1988: 43–44).

3. It was called *tsuidome*, which often caused severe hunger in regions experiencing crop failure.

4. The Tokugawa government almost completely closed Japan to trade with foreign countries. Therefore, we do not need to take into account the international trade in rice.

5. The rice tax rate is assumed to be 40 percent, and the taxable standard is taken to be two-thirds of the total rice harvest (Miyamoto 1988: 21).

6. One *koku* of brown rice is 150 kilograms. By the end of Tokugawa period to the early Meiji period, traditional vessels were replaced by much larger modern sailing ships and steamers. The minimum transaction unit in these ships was 500 *koku* (= 75 metric tons of brown rice).

7. Under the national isolation policy of the Tokugawa shogunate, beginning in the early seventeenth century, the building of ocean-going ships was banned and the art of navigation degenerated.

8. Although import tariffs were occasionally imposed on rice from Korea and Taiwan, China, there was little government intervention in the domestic market during this period.

9. The role of local auction markets, which had formed local centers for the formulation of rice prices in each region since the Tokugawa period, was weakened through this process.

10. Koiwa (1981: 41). The data represent five-year averages centered on each of the years shown, respectively.

11. Similar movements for quality control and standardization initiated by local traders were observed in the cotton-weaving industry. See the chapter by Itoh and Tanimoto in this volume.

12. The discussion in this section is based on Yamagata-ken Sanmai Kairyô Kyôkai Rengôkai (1958).

13. See Smith (1959: chapter 6) for the development of markets in the Tokugawa period.

14. The following description draws on Toyohara Kenkyûkai (1976: chapter 7; 1977).

15. A bag made from rice straw, called *tawara* (*hyô*), contained about 0.4 *koku*, or 60 kilograms, of brown rice.

16. Only very large landlords held more than 50 hectares of farmland; the average holding of noncultivating landlords was only around 1 hectare.

17. If post-harvesting or marketing processes owned by producers reveal economies of scale, groups of farm producers, dealing with one specific area of activity, may organize cooperatives in order to seek scale economies for marketing through joint facilities for storage or processing.

18. Yamagata-ken Sanmai Kairyô Kyôkai Rengôkai (1958: 26–33).

19. See Kawagoe (1993) for further discussion.

20. Under the Uruguay Round of multilateral trade negotiations of the General Agreement on Tariffs and Trade, the Japanese government agreed to maintain minimum access opportunities for rice imports in compensation for tariffs. The government also planned to replace the obsolete food control system with a deregulated system based on a new food law in 1995. Under the new system, it is expected that private market channels will be activated.

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3

Rural Entrepreneurs in the Cotton-Weaving Industry of Japan

Motoshige Itoh and Masayuki Tanimoto

The textile industry has been important to the Japanese economy for a long time. The industry had already assumed a crucial position in the Japanese economy in the Tokugawa period (1603–1867). National distribution networks were functioning well for a variety of textile products during this period, and both local and national wholesalers played important roles in distributing products, making it one of the industries of the time with the most sophisticated distribution systems. There were many established local production areas for textile products in the Tokugawa period, and the putting-out system, which is one of the main subjects of this chapter, could be observed.

The change from autarky to free trade at the end of Tokugawa period (1859) created a great shock for the industry. On the one hand, competitive foreign textile products, both yarn and fabrics, came from foreign countries, and severe competition restructured the domestic industry. On the other hand, international trade offered domestic producers the opportunity to sell their products in foreign countries.

Japan established itself as one of the largest exporters of textile products in the world in the 1920s, and it became the world's largest exporter of cotton textile products in the 1930s. The textile industry continued to be a major export industry for Japan until the beginning of the 1970s. Table 3-1 shows the share of the textile industry in the total exports and outputs of Japan from 1882 until 1970. The shares, both in exports and in outputs, were very high (note that the cotton textile industry was in the majority in these figures).

Although the structure of the industry changed many times during this period, the industry retained many of the characteristics it had more than 100 years ago, when Japan opened its market to the rest of the world. Active use of the putting-out system and the role played by wholesalers are typical examples of the traditional business practices.

Table 3-1. The Share of the Textile Industry in Total Manufacturing Imports and Output, 1882–1970
(percentage)

Period	*Imports*	*Output*
1882–91	35.2	27.8
1892–1901	52	34.7
1902–11	50	26.8
1912–21	51.3	30.1
1922–31	55.5	30.1
1930–39	43.7	23.7
1951–55	41.5	18.3
1966–70	14	8.2

Source: Yamazawa (1984).

A study of the historical development of the Japanese textile industry at the turn of the century is helpful in understanding how the industry has developed and achieved its present form. Such a historical study will also provide useful insights on the general topic of this volume, "the role of rural entrepreneurs in Asia," because the textile industry is typical of rural industry and its development and has been supported by the activity of many local traders and farmers.

There is a vast literature on the history of the textile industry in Japan. Both semi- macroeconomic and microeconomic analyses of the industry are available for a variety of production regions. Since most of the studies are reported solely in the Japanese language, it will be useful to review the literature. Although a comprehensive survey is far beyond the scope of this chapter, we offer a rough summary of the literature here as background for our discussion.

The major portion of this chapter is based on Tanimoto's (1986) previous study of one particular production area, Iruma. The study is a microeconomic analysis of production and distribution activities in this narrow region, based on the detailed documents of a few local merchants in the area in the period from 1850 through 1925.[1] By using these documents, we can draw a detailed picture of the structure of transactions in the region.

Iruma is an interesting case for our project because it is located in a rural area and its products were primarily intended for the domestic market. The cotton-textile industry was greatly affected by international trade, and some production areas in Japan became heavily involved in exports. Iruma, however, was completely dependent on the domestic market. This dependence was supported by the network of wholesalers, local merchants, local wholesalers, national wholesalers, and financial agents. Without such sophisticated networks of merchants it would have been impossible for the small, independent producers of the area to meet the demand of consumers throughout the nation. An analysis of the structure of transactions among these wholesalers, as well as producer-farmers, is essen-

tial for the study of the evolution of rural entrepreneurs in the cotton-textile industry in Japan.

The putting-out system is one of the most important elements in our study. In its historical as well as in its contemporary form, the textile industry has had many kinds of putting-out systems. This contrasts with the industry's development in England, for example, where the factory production system replaced the putting-out system in an early stage of the industry's development. Putting out is still very visible in many places in the present textile industry in Japan, not only in the cotton-weaving industry but also in the production of other textile materials, although the styles of putting out vary among materials. Iruma's case is useful for its illustration of the emergence of the putting-out system: it came into use only after 1890 in this region, although it was observed much earlier in other regions, and data are available for both the periods before and after the putting-out practice emerged, so it is possible to compare the two periods. Quality control in its broad meaning is quite important for the emergence of putting-out system in this area, although this is only one of several reasons we can think of as factors that generated the overall putting-out system; major reasons for the emergence and development of the putting-out system differ among regions.

Overall Historical Picture of the Cotton Textile Industry of Japan

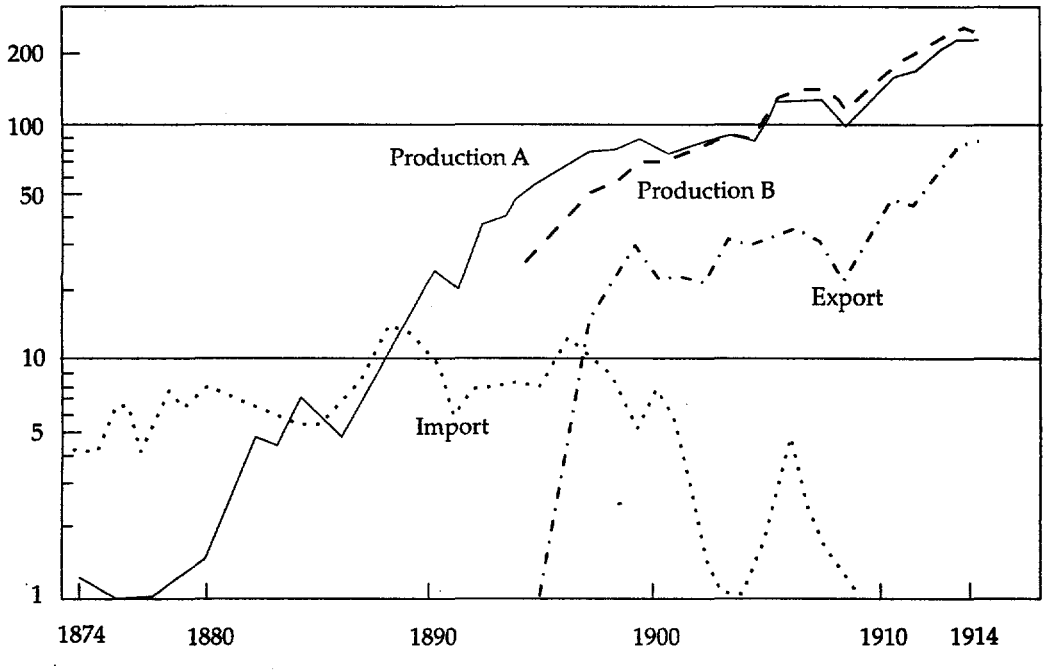
By the latter half of Tokugawa period, there were already many established local cotton-production areas, and distribution networks were well developed. In this period the pattern of procurement of cloth by ordinary people took three forms: purchase of second-hand cloth, home production of cotton apparel from cotton material, and purchase of new cotton cloth from the market. Although most of the people in rural areas purchased second-hand cloth or made their own cloth from raw materials, some segments of the population purchased new cotton cloth. According to a study in Yamaguchi Prefecture (Chosyu), about 23 percent of the relatively high-income population purchased new cotton cloth (Saito and Tanimoto 1989).

Japan was under autarky until 1859, and opening of the market to the rest of the world in 1859 greatly affected the structure of the industry. The export of silk grew rapidly right after the opening of the market, but the export of cotton fabric products did not show much activity in the early years. Both yarn and fabrics were imported from foreign countries, and imported yarn replaced handmade domestic yarn.

The availability of inexpensive imported yarn changed the competitive positions of production areas. Iruma took advantage of imported yarn and expanded its share in the national market. Some of the production areas, which not only wove textiles but also spun their own yarn, lost their competitive position as the cheap yarn was imported from abroad.[2]

Import of cotton yarn far exceeded domestic production soon after the opening of the market. Figure 3-1 shows the magnitude of imports and domestic production of machine-spun cotton yarn from 1874 until 1914. According to figure 3-1, domestic production reached

Figure 3-1. Output and Trade of Cotton Yarn, 1874–1914



Production A is based on the estimate by Shinohara.
Production B is based on data of "Kindai-teki Boseki Goisha."

Source: Abe (1990).

the level of imports only in the mid-1880s. The large volume of imported yarn from the opening of the market until the 1890s played an important role in the development of new production areas such as Iruma, as will be explained in the next section.

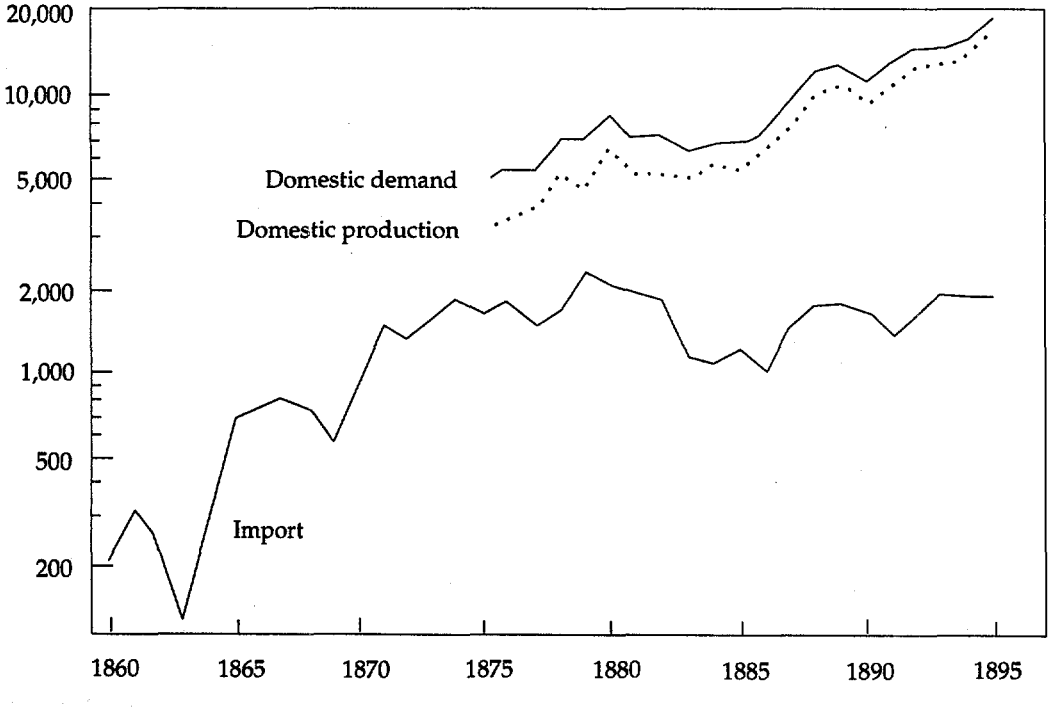
The domestic production of cotton yarn by large factories started in the 1880s. As shown in figure 3-1, production expanded rapidly in the 1880s and 1890s. Growing use of cotton yarn by domestic weavers was the most important force supporting the expansion of domestic yarn production. Although exports of cotton yarn started in 1890, the share of exports held by spinners of domestically produced yarn was less than 6 percent in 1895. The use of their own cotton yarn by the textile division was negligible in 1885, and most of the yarn produced was supplied to independent weavers in Japan. In this sense, fabric production in localities throughout Japan played an important role in sustaining the growth of domestic yarn production.

Figure 3-2 shows the trends in cotton fabric markets from 1860 until 1895. Import of cotton fabrics expanded rapidly from the opening of the market until the early 1870s. At

the peak, imports accounted for about 34 percent of domestic consumption. Domestic demand also expanded rapidly in this period, increasing threefold from 1875 to 1895. Behind this high growth of domestic demand was the changing pattern of consumer cloth procurement. As previously mentioned, before the opening of the market, second-hand use and home production were the dominant forms of clothing procurement, and purchase of new fabrics was restricted to relatively wealthy families. In the latter half of the nineteenth century, however, procurement of cloth shifted from second-hand use and home production to the purchase of new fabric. Reflecting this changing pattern of demand, the growth rate of demand for fabrics in rural areas exceeded the national average. According to Saito and Tanimoto (1989), the increasing income of farmers and the fall in the price of cotton fabrics relative to the prices of other goods were crucial factors in this growth in demand.

As we can see in figure 3-2, both domestic demand and domestic production grew rapidly. As we will see below, there was a clear difference between imported fabrics and domestically produced fabrics in this period. It is important to note that the domestic distribution system played an important role in meeting the expanding demand and the

Figure 3-2. Cotton Fabric Demand and Supply in Japan, 1860–95



Source: Saito and Tanimoto (1989).

needs of domestic production. Newly rising wholesalers in Tokyo, such as Chogin and Benichu (Chu Itoh), were actively engaged in expanding their sales territories into such rural areas as Tohoku, Hokkaido, Chugoku, Shikoku, and Kyusyu, all located far from centers such as Tokyo and Osaka. We will see the role of these large wholesalers in the next section.

There were many production regions for cotton fabrics in Japan. After the opening of the market, there was substantial restructuring in these regions. Roughly speaking, the production regions were classified into two large categories: one included the regions engaged in mass production of white cotton fabrics, and the other encompassed the regions that produced small volume, differentiated cotton fabrics. In the first category, large firms with both spinning and weaving divisions contributed a large portion of the national production in more recent years (this analysis is based on Tanimoto 1986). There were also several production areas where the white cottons were produced under the putting-out system. There were numerous local production areas, each engaged in the production of differentiated products, and each specialized in its own product list. Iruma, which we will discuss in detail in the next two sections, was typical of this category.

The products of local production networks were generally for domestic use. Differentiated textiles produced in small volume lacked international competitiveness, but the products were accepted by the domestic market. Only the products of large spinning-weaving firms were exported in the 1890s, but export of the products of local networks became established, gradually expanded, and became an important part of Japanese exports in the 1920s.

Because the focus of this chapter is the rural production system, attention will largely be restricted to local production networks. As will be discussed in greater detail later, the putting-out system played an important role in these local production networks. According to Abe (1990), among the 448,609 weaving firms (or houses) registered in the 1905 statistics of the Ministry of Agriculture and Commerce, 35 percent were independent weavers and 65 percent were under putting-out contracts. Among the independent weavers, 1 percent were relatively large factories that employed more than ten workers; 31 percent were small, independent weavers with fewer than ten workers; and 3 percent were wholesalers. (Note that these shares were calculated in number of firms, or houses). Putting out was thus a common practice of the industry in this period, at least in the number of the producers involved.

The putting-out system was in place in the Tokugawa period, and two arrangements could be observed. One was *Watagae Sei* (cotton offer system) and the other was *Dashibata Sei* (machine-rental system). Under *Watagae Sei*, wholesalers provided farmers with raw cotton and received the outputs. The farmers' fees were often paid in raw cotton (or ginned cotton). Under *Dashibata Sei*, wholesalers provided farmers with looms and cotton yarn and collected the finished fabrics. Although there were many areas where wholesalers engaged in the simple sale of materials and the purchase of the outputs (thus, no putting-out), there were also some regions where the putting-out systems were observed. As we will discuss below, putting-out was not active in Iruma until the 1890s.

The Early Form of the Local Production System: Iruma, 1850–80

The Iruma area offers an excellent illustration of the functioning of a local textile production network in the early period (the latter half of the nineteenth century).[3] Cotton products in Iruma gained expanded markets through the activities of local merchants, who were supplied by the farmers of the region. The construction of a sales network with a local center was crucial to gaining access to the national market for the products of Iruma. The distribution network, supported by a sophisticated payment system, promoted the expansion of sales. Hachioji City, the local center for Iruma, was successful in collecting products of the region, and newly emerging large wholesalers in national centers such as Tokyo and Osaka considered Hachioji City as one of the important sites for their procurement of textile products. Distribution of the products was supported by these traders, and production processes depended on the work of wives or daughters of the farmers and were carried out in the farmers' "houses" as domestic industries.

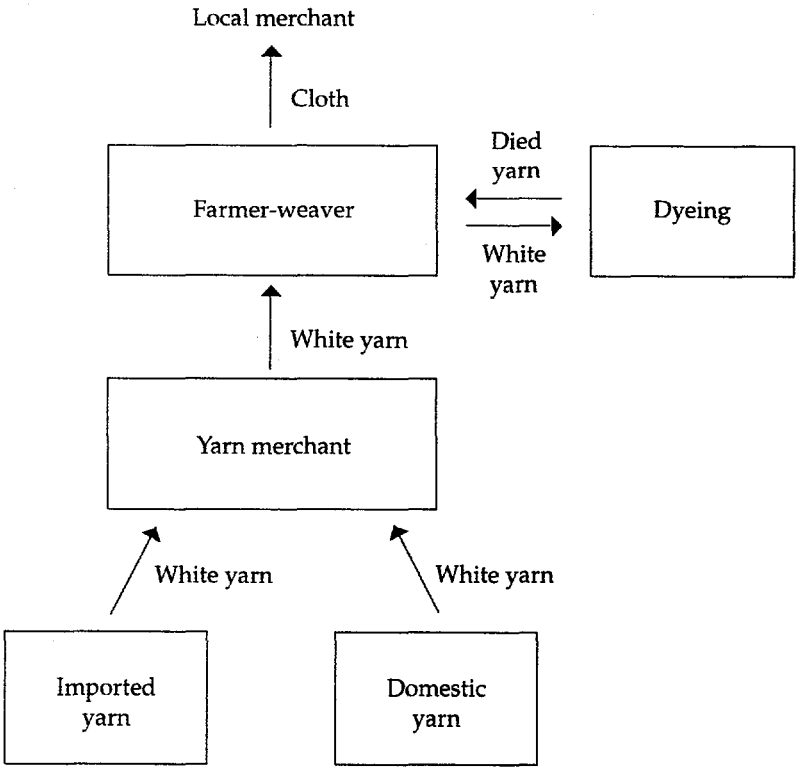
Iruma, in Saitama Prefecture, is a typical rural production area of the cotton textile industry. It is located in a rural agricultural area, about 30–40 kilometers northwest of Tokyo. The production of cotton textiles in the Iruma area started in the beginning of nineteenth century, and it had become one of the leading new cotton textile production areas of Japan by the 1890s. This area produced differentiated cotton fabric products, primarily for domestic uses. Thus, this production area is in the second category in our classification system.

The structure of the production and distribution of the products produced in this region in the period from 1850 through 1880 is illustrated in figures 3-3 , 3-4, and 3-5. Figure 3-3 illustrates the production relationships in a village, and figures 3-4 and 3-5 illustrate the distribution network for the products. The main players in this system are (1) local merchants near the village, (2) local wholesalers near the local city, (3) farmers, (4) yarn merchants, (5) financial intermediaries, and (6) national-level wholesalers.

Local merchants played the role of channel leaders in this local production network. Channel leaders connected the producers, who were widely scattered among several villages, with the distribution system that had been organized by local and national wholesalers. They purchased cotton fabrics at local markets or directly from farmers and sold them to local wholesalers. The local market (*ichi*) was the center for local transactions, and it opened regularly on predetermined dates in each town.[4] Some local merchants who collected cotton fabrics from farmers brought the fabrics to the markets for sale; others purchased the fabrics at the market and sold them to local wholesalers.

Tanimoto (1986) studied the transactions of a typical local merchant, the Hosobuchi family. The record reported an interesting pattern of change in the transactions this family organized. In the early period (the 1850s), the family purchased the products from farmers and sold them in the local markets (see figure 3-4); the family's transactions have expanded considerably since then. Figure 3-5 illustrates the family's pattern of transactions in the 1880s, when they expanded considerably and the family purchased their products not only from farmers but also in local markets. The family sold the products to the local wholesalers living in Hachioji (the neighboring large, local city). The Hosobuchis expanded

Figure 3-3. Production Process of Cloth in Iruma District, 1850–80

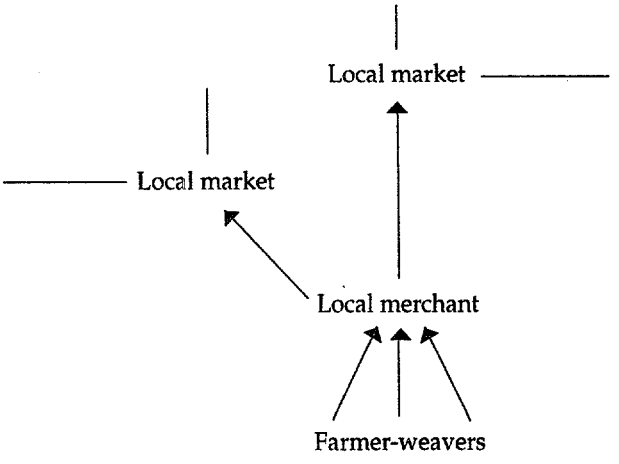


transactional relations with large local wholesalers in Hachioji City, and through these transactions the family expanded its business. Note also that there were established routes to the national market through these large local wholesalers during this period.

Let us next look at the relationships between farmers and local merchants (figure 3-3). In this period we cannot yet observe the putting-out system. Local merchants simply purchased finished cotton fabrics from farmers with cash. Farmers purchased wooden, handheld looms and yarn, and they made fabrics at their own risk. They then sold the fabrics to local merchants. Note that the problem of incentives, which will be discussed in the next section, was not serious in this system—farmers accepted the risk.

The price of a wooden, handheld loom was about 1.5 yen, while the output of cotton fabric is about 1 yen per tan (3.3–3.5 square meters); thus, the prices of looms were not expensive compared with the prices of fabrics. Although we cannot calculate cost of investment with such limited information, we can say that the farmers could afford to buy looms by themselves. The low price of a loom was an important factor in the establishment of rural production networks.

Figure 3-4. Distribution System of Cloth in Iruma District, 1850s



In textile production we can observe a typical division of labor among family members. One family usually owned one or two looms. Male workers were engaged in agricultural production, and only female workers were involved in weaving. We can observe some seasonal fluctuation (figure 3-6) in the production of textile products, which reflects the cycle of agricultural activities.[5] Female workers were involved in weaving activities when they were not asked to supply agricultural labor service.

Figure 3-5. Distribution System of Cloth in Iruma District, 1873–74

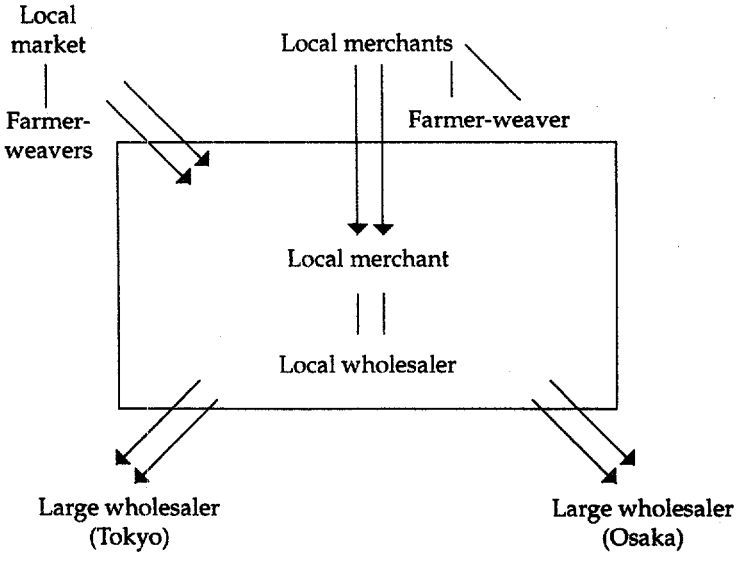
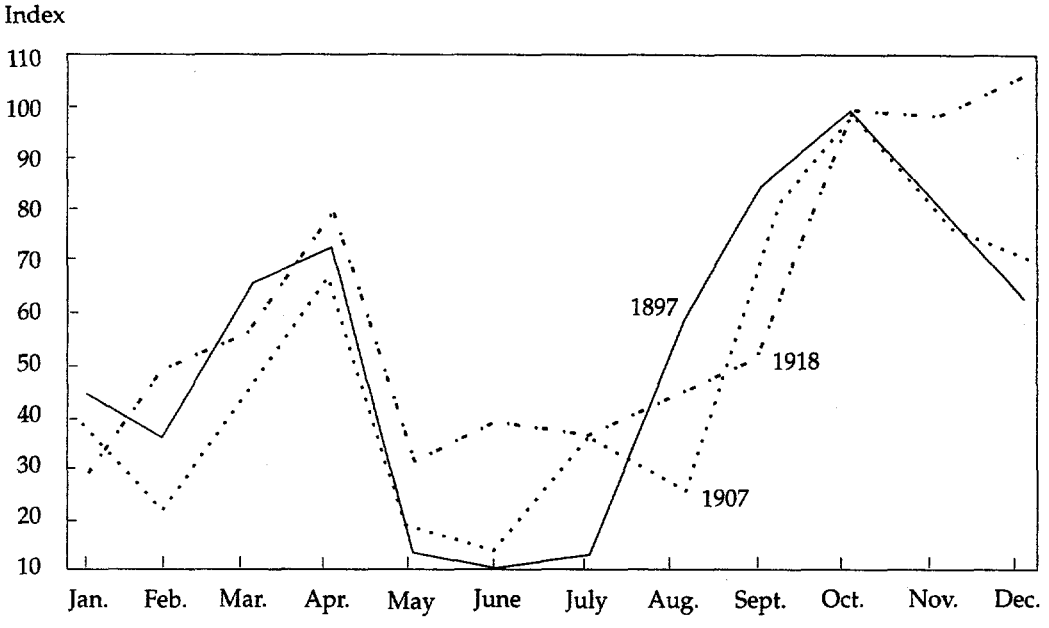


Figure 3-6. Seasonal Fluctuation of Transactions Between Takizawa and Farmer-Weavers



Farmers purchased yarn from yarn merchants (figure 3-3), who lived in the local village and purchased domestic yarn from neighboring yarn-production villages and imported yarn from importers.[6] The transactions of yarn between yarn merchants and farmers were usually accomplished through cash or draft, but deferred payments were also observed. Deferred payment made it easier for farmers to purchase yarn for their production. This area originally purchased yarn from a near-by (but not in the same village) production area through the channel of yarn merchants, but gradually local yarn was replaced by imported yarn, in contrast with other production areas where both weaving and spinning were conducted in the same village. In the latter case, replacement by imported yarn was delayed, and the delay hindered the development of the production region, since imported yarn was much cheaper.

Let us now discuss briefly the position of local wholesalers in the local commercial center. As mentioned above, Hachioji was the local center of this production area. It began as one of the local markets for textile products, but it gradually became the center in the region. Not only the cotton products of Iruma, but also other products, including silk, were collected in Hachioji and shipped to large markets such as Tokyo. Large wholesalers in Hachioji had branches in Tokyo and were involved in active transactions with large national wholesalers there. As mentioned before, new national wholesalers such as Chogin and Benichu (Chu Itoh) were very anxious to expand their sales territories. Some large

merchants in Tokyo had strong ties with local wholesalers in Hachioji and purchased the cotton fabrics of Iruma. Through such a network, the products collected in Hachioji were shipped to the whole nation.

In the beginning, cash was used for the transactions within the distribution system, but as the amount of transactions expanded, commercial credits were gradually introduced. Figure 3-7 illustrates the flow of payments among wholesalers in 1871. In this picture we have four examples: local wholesalers in the local center (Hachioji), local merchants collecting products from small traders and selling to the large local wholesalers, small local merchants collecting products from farmers and selling them to large local merchants, and financial agents. The transactions between the local wholesalers and the local merchants were paid by *tegata* (draft promissory notes issued by buyers), which were discounted by the financial agents. There is no commodity transaction between local merchants and the financial agents. The transactions between large and small local merchants were made by *kawase* (money orders issued by local merchants), much like a check using the account of the financial agent.

Commercial credits were extended by local merchants to the local wholesalers. These credits were an important method for local merchants to explore new markets for their products. Nevertheless, active use of commercial credits also caused financial shortages for local merchants. The role of financial agents was important in this area, because local merchants could discount drafts through these agents. The financial network thus supported the expansion of sales of products in Iruma to the national market.

Financial transactions became more sophisticated later. Figure 3-8 illustrates the financial flow in this region in the period from 1877 through 1882. Although the basic structure of the financial flow did not change from that shown in figure 3-7, there are more mer-

Figure 3-7. Payment System (I), 1871

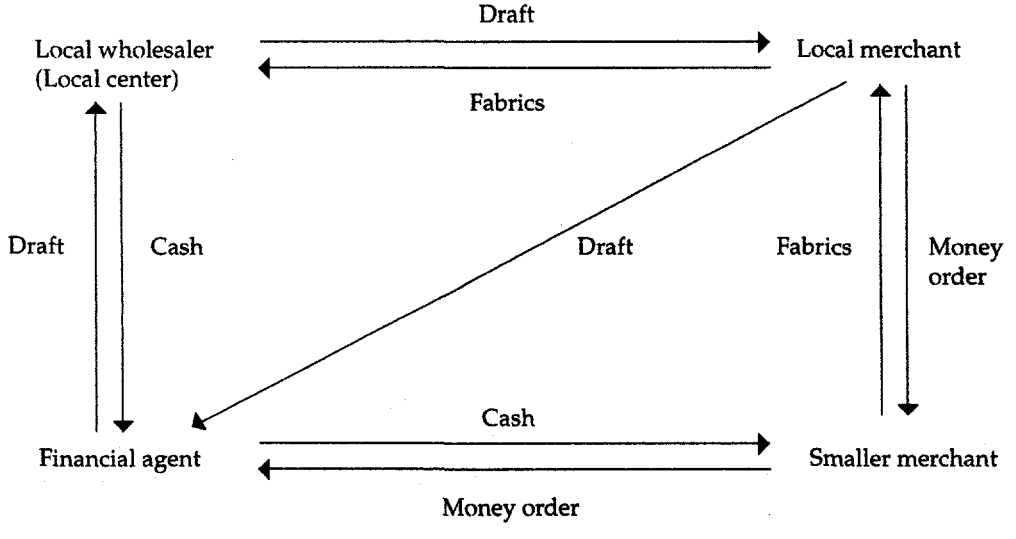
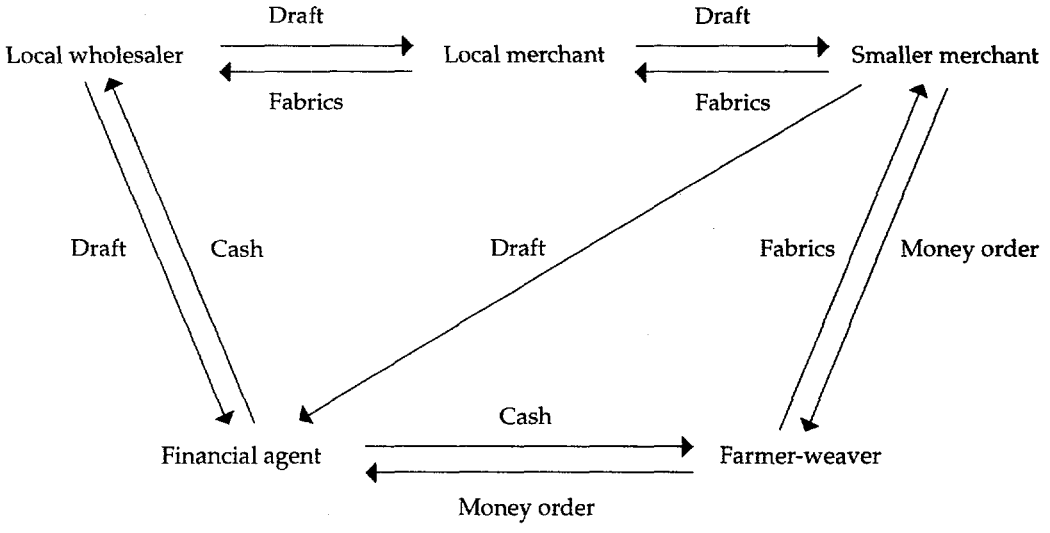


Figure 3-8. Payment System (II), 1877–82



chants involved in the transactions between small local merchants and local wholesalers. Financial credits by draft were used to facilitate the transactions.

Development of the Putting-Out System

Although putting out was not observed during the period of 1850–80, when Iruma became one of the large local production regions of cotton textile products, the practice of putting out gradually spread in this region after that time.

The reason for the emergence of the putting-out system differs among the various production regions. In the case of Iruma, the quality control problem was a crucial factor that led to the emergence of the putting-out system. As production areas developed in Japan, competition among local production areas increased. In such a competitive environment, the quality of products became the crucial factor in their success. (By quality of products we mean not only such simple quality considerations as flaws, but also such elements as design and style of the products.) The cotton fabrics of Iruma became recognized as a local brand in the national market. Wholesalers, both local merchants and local wholesalers, became more conscious of these factors.

In order to establish the Iruma brand, it became increasingly important for local merchants to standardize the quality of their products. To encourage this, the merchants started to give farmers dyed and sized yarn (not undyed yarn) and to receive fabrics of specified pattern and color. The traditional transaction relation, in which farmers purchased yarn, wove fabrics, and sold to the merchants, is unsuitable for standardization of products. The farmer does not have much information about the final consumer market or the capability

to make quick adaptation to market demand. Without someone coordinating the quality control of a large number of independent farmers, it would have been impossible to establish the local brand. The putting-out method was a natural choice by the merchants to achieve the needed standardization.

Note that the putting-out system is not the only way to achieve standardization—factory production may be a more desirable method. The comparison between Japan and England is quite interesting in this respect. In England, the factory production system was chosen. Hiring workers and monitoring their behavior in factories are certainly better avenues to control quality, but this was not what happened in Iruma.

To understand the reason why putting out, not factory production, was chosen in Iruma, it is useful to consider the ways in which the putting-out system is superior to factory production, and the ways it is not. One of the strengths of the putting-out system is its flexibility. By organizing a putting-out system, wholesalers can be more flexible about the size of their outputs. When the market is active, they can increase transactions with farmers, and when the market is weak, they can diminish transactions. In the case of factory production, however, the owner of the factory must make a commitment to the size of output because of the large amount of fixed capital.

The other advantage of the putting-out system is the availability of cheap labor in the farm family. Only female workers were involved in the production of cotton products in Iruma, and they engaged in cotton production only when they did not have agricultural or household tasks. For these female workers, it was important to be able to stay at home because they could use their spare time for weaving. The opportunity costs for working in factories were quite high.

From the viewpoint of farmers, the putting-out system offered far more flexibility in working hours than being employed in a factory. It also provided opportunities to enter the industry without much risk. Since farmers got substantial portions of their income from agricultural activities, fluctuation of income from weaving did not cause serious problems. Furthermore, it was possible for farmers to have putting-out arrangements with more than two merchants, which helped them cope with demand fluctuation. The farmer-weavers were thus less dependent on merchants than workers are on their factory managers in several important areas.

Of course, the factory production system is better than the putting-out system in several respects. First, quality control is far easier under factory production than under putting out; this is particularly so in the issue of embezzlement, as will be discussed below. Second, it is much easier to achieve production stability under the factory system than under the putting-out system. Because the labor of subcontracting weavers fluctuates with the schedule of agricultural activity, merchants should have had difficulty achieving production stability, but flexibility of production, mentioned above as one of the merits of putting-out system, and instability of production are the two sides of the same coin. Third, factory production is better than putting out when technology is subject to scale economies. When powered looms were introduced into this industry, factory production replaced a large portion of putting-out production by farmers. Scale

economy based on expensive machines makes factory production more suitable than putting-out arrangements.[7]

Both the factory production and the putting-out systems have strong points, and it is not possible to conclude which system was better without specifying the environments the industry faced. The more frequent use of the putting-out system in Japan than in England implies that there were several factors in Japan that made putting out more suitable. The following points from our case study of Iruma offer insight into these differences.

Table 3-2 shows how the merchants of Takizawa coped with fluctuation of demand. This table details the distribution of the amount of transactions for each farmer and the number of farmers among the categories of transactions. The merchants had a large volume of transactions with the farmers who had long-term transactional relations with the merchant, while there were a large number of farmers with whom the merchants had only small transactions, and only during a given year during the period of 1896–1925. The local merchant could cope with fluctuation in demand in this fashion. The farmer-weavers who had short-term transactional relationships with this merchant had transactions with some other merchant or merchants as well. As will be discussed in the next section, that is the case even under the putting-out arrangement in the contemporary textile industry.

The long-term transactional relation is crucial for the maintenance of quality. Under long-term transactions, farmer-weavers have reduced incentives to cheat.[8] The farmer-weavers might compare the short-run gain from cheating (cheating of many forms, from such obvious actions as embezzlement to more subtle cheating, such as less effort toward quality improvement) with the long-run loss of losing transactions with the merchant. The longer the transactional relationship was in place, and the larger the rent from the transactions, the less were the incentives to cheat.

Table 3-2. Distribution of Transaction Years in Total Transactions, 1896–1925

Term of transaction between Takizawas and each farmer-weaver (years)	*Number of farmer-weavers*	*Volume of transactions between Takizawas and farmer-weavers (1,000 tan)*	*Share in total volume of transaction (percent)*
1	623	24	5.4
2	272	35	7.8
3–4	195	56	12.2
5–9	180	156	34.0
10–14	47	117	25.6
15–19	12	43	9.3
> 20	6	26	5.7
Total	1,335	457	100.0

Note: "Tan" is a Japanese unit of cloth, about 3.5 square meters: width 0.35 meters, length 10 meters.
Source: Archives of Takizawas.

Note that the issue of embezzlement was an important one for putting-out arrangements (see, for example, Styles 1983 and Randall 1990). When farmers purchased yarn by themselves, embezzlement could never arise. Under the factory production system it was difficult for workers to cheat by stealing yarn. Thus, embezzlement (that is, cheating of yarn) can occur only under a putting-out arrangement. When farmers were provided with yarn from merchants, they had incentives to take some yarn for their own use. Thus, under the putting-out arrangement, merchants must prepare some mechanisms to discourage cheating. The long-term transactional relationship is one such mechanism.

By forming a combination of a large volume of transactions with a small number of farmers through long-term transactions and a small volume of transactions with a large number of farmers through short-period transactions, merchants could achieve two goals. They received products of good quality from the farmers with whom they had long-term transactional relations, and they gained flexibility in the amount of fabric they received through spot transactions with a large number of farmers.

The question then arises of why the putting-out system was not used in England, in spite of the advantages it offered. We do not have a good explanation now, but population density may be one factor that explains the difference between Japan and England. Population was much denser in Japan than in England, and dense population allowed wholesalers to organize a putting-out system in a relatively narrow region. Geographical concentration permitted wholesalers to have better monitoring. Human relationships within the community and other social ties might provide better incentives for farmers not to cheat in the Japanese context.

Table 3-3 provides some insight in this matter. It illustrates the transactions of one local merchant in 1897 and 1918 and the amount of transactions in each village and their share in total transactions. As the table demonstrates, this merchant's transactions became much more geographically concentrated in 1918 than they were in 1897. Thus, as putting-out practices expanded, the merchant made the geographical range of his transactions smaller. Such restriction of geographical distance gave merchants better control of quality.

The role of public support is also of significance here. As in other local production areas, public support by local government played an important role in the development of the Iruma production area.[9] For the case of Iruma, the roles of its industrial association and the technical school should be mentioned.

In 1900 the Japanese government enacted *Juyo Bussan Dogyo Kumiai Ho* (Law on Industrial Associations of Important Products). Under this law, an industrial association would be established in a local area if there was consensus on the formation of the association by more than two-thirds of the producers in a given product category; all producers are then required to be members of the association. Under this law, the association must include members who serve as inspectors. These members check the products of the association members and punish any cheating.

Based on this law, the *Musashino Orimono Dogyo Kumiai* (Industrial Association of Weavers in Musashino) was established; the association has been active since around 1910.

Table 3-3. Geographical Distribution of Transactions

			1897		*1918*	
	Village or town	*Section*	*Transaction volume between Takizawas and farmer-weavers (tan)*[a]	*Share in total transactions (percent)*	*Transaction volume between Takizawas and farmer-weavers (tan)*	*Share in total transactions (percent)*
North	Irumagawa	Unoki	200	1.8		
East	Iruma	Iriso			60	0.3
↑	Mizutomi	Sasai			228	1.0
	Toyo'oka	Takakura	493	4.5	6,123	27.0
		Machiya			386	1.7
	Higashikaneko	Koyata[b]	5,110	46.7	8,541	37.7
		Araku	1,010	9.2	4,661	20.6
	Motokaji	Noda			590	2.6
		Bushi			115	0.5
	Kaji	Iwasawa	38	0.3		
		Asu	13	0.1	117	0.5
	Miyadera	Ogayado			12	0.1
		Omori			135	0.6
	Motosayama	Nihongi			142	0.6
13 km	Kaneko	Negisi	138	1.3	781	3.4
		Nakagami	12	0.1	85	0.4
		Hananoki			90	0.4
		Yaganuki	26	0.2	564	2.5
		Kamiyaganuki	77	0.7		
		Teratake	363	3.3		
		Mine	286	2.6		
		Mokurenji	1,231	11.2		
	Kasumi	Nanokaichiba	169	1.5		
		Imai	986	9.0		
		Imadera	65	0.6		
		Daimon	286	2.6		
↓		Fujihashi	412	3.8		
South		Yano	13	0.1		
West	Chofu,	Nogami	12	0.1		
	etc.		13	0.1	13	0.1
	Total		10,953	100.0	22,643	100.0
	Sum of top three sections		7,351	67.1	19,325	85.3

a. See the footnote to table 3-2.

b. Takizawas (= putters-out) is located in Koyata (Higashikaneko village).

Source: Archives of Takizawas.

Seizogyo-bu Seinen Bukai (Young Members' Group of Weavers) was formed within the association, and the members of this group visited weavers and examined the quantity of yarn provided and the fabrics produced in order to check the possibility of embezzlement.

In order to establish the standardization of the products in the area, the association prohibited farmer-weavers from using looms that did not pass its inspection. The association also required members to use only the dyeing factories authorized by the group.

Another association (*Hosho Sekinin Musashi Orimono Shinyo Hanbai Koubai Kumiai*) was also established. The purpose of this group was to obtain subsidized financial support from both the national and local governments to purchase yarn.

The prefecture government (local government) started the *Kawagoe Senshoku Gakko* (dyeing school) in 1907. The people who were educated in this school became the core members of a new generation of local entrepreneurs in this area. The engineering teachers in the school were also involved in the inspection activities of the association (see Tokorozawa-shi 1989).

It is not easy to evaluate how effective these local government supports were in the development of the Iruma production area. It should be noted, however, that the local government made an effort to nurture the local production area. This is not unique to Iruma, or to the weaving industry. Similar supports can be observed in many other areas and in many other industries in Japan.

The Contemporary Putting-Out System

Although our main concern in this chapter is historical forms of the putting-out system in the cotton textile industry of Japan, it is useful to review briefly the contemporary forms of the putting-out system. It is important to note that the putting-out system is common practice in the contemporary textile industry of Japan. Putting out is more commonly observed in Japan than in other countries, not only in the textile industry, but also in other industries such as automobile production and electronics (see Itoh and Urata 1994 for the structure of the putting-out system in the production of automobile parts, silverware, and synthetic-fiber textiles).

Two cases of the putting-out practice in the contemporary textile industry are illustrative.[10] One is the case of synthetic-fiber textile industry, where extensive putting-out relationships can be observed between large chemical companies (or wholesalers) and weaving houses. The other is the case of the weaving of wool fabric, where a large number of small weavers have putting-out relationships with parent weavers.

In the synthetic-fiber textiles industry, a large portion of weavers have putting-out contracts, either with large chemical companies or local wholesalers. In a typical putting-out contract between chemical companies and weaving houses, the chemical companies, which are large, listed companies, produce synthetic-fiber yarn from chemical process and distribute these yarns to weaving houses. Woven fabrics are returned to the chemical compa-

nies for the finishing process, and chemical companies sell these products to the market. Weaving houses are the subcontractors for chemical companies; weaving houses do not engage in the marketing of their products, nor do they take any risk for selling them. The chemical companies not only play the role of manufacturers as the producers of synthetic-fiber yarn, but also the role of marketing organizer. The role played by chemical companies has some similarity to that of the merchants in our Iruma example. The local weaving houses depend heavily on chemical companies for services such as marketing, product development, and risk-taking. All the weaving houses in the synthetic-fiber industry are small and medium-size firms; employees number fewer than 300, and the majority of the houses employ fewer than 50. Through their relationship with the chemical companies, the small and medium-size local weaving houses can survive in a very competitive market environment.

Large chemical companies also gain from the putting-out system. The chemical companies can enjoy the flexibility of the putting-out system, as in the case of Iruma, explained earlier. They can adjust the amount of production by adjusting the orders they give to weaving houses. As in the case of Iruma, the subcontracting weaving houses are ranked according to the degree of their relationship with each chemical company. Stable orders are given to the weaving houses with the closest ties to a given chemical company, while the orders to less firmly aligned weavers fluctuate considerably, depending on market conditions. The latter type of weaving houses have transactional relationships with a number of chemical companies as well as with local wholesalers so that they can spread their risk.

This system of putting-out in the synthetic-fiber textile industry emerged in the postwar period. After the invention of new synthetic fiber materials, a group of leading local weaving houses asked large chemical companies to start a putting-out system. This request was based on the weavers' lack of adequate financial resources to purchase expensive synthetic-fiber yarn. This request from weaving houses for putting-out contracts also benefited the chemical companies, because they did not have to make an investment in the weaving process. The existence of the network of weavers in local areas made it possible for large chemical companies to enjoy rapid expansion in their production of synthetic fiber textiles. It is also important to note that this contemporary putting-out arrangement allowed traditional small-scale weaving houses to survive the modern technology of synthetic fibers.

The leading local production areas of synthetic-fiber textiles are located on the Japan Sea side of Japan (Fukui and Ishikawa Prefectures), which was originally the production area of traditional silk textiles. This local production network started more than 100 years ago and has gradually changed its products. In that sense, we can observe historical continuity. There had been substantial concentration of producers in this area—not only weavers, but also finishing companies, textile-machine producers, and textile wholesalers. This production area also nurtured the textile-machine industry and the dyeing and printing industry; some of the modern technology firms emerged from these industries.

The next example of the use of the putting-out system is in the weaving of wool textiles (the following is based on Findlay and Itoh 1994). Ichinomiya is the largest production area in Japan for wool, and there are many weaving houses there. Contrary to the case of synthetic-fiber textiles, weaving houses of woolen cloth are independent from large spinning companies. Weaving houses purchase wool yarn from spinning firms at their own risk and sell their woven fabrics to apparel companies; putting out is not as common between wool spinners and weavers. Although there are some weaving houses that are subcontractors for spinning firms, they do not represent the majority of the industry.

We can, however, observe another form of the putting-out relationship, that between large and small weaving houses. According to a study in the late 1980s, there were about 250 parent weaving houses and about 4,000 to 5,000 subcontracting weaving houses in the Ichinomiya area. We can observe extensive putting-out transactions between parent weaving houses and subcontracting weaving houses. The subcontracting weaving houses are usually family-run businesses, and each weaving house generally employs fewer than three workers. These small weaving houses accept orders from larger weaving houses, and they are given yarn and the specifications for the fabrics they are to weave and are paid at the piece rate—it is a typical putting-out relationship, with all the risks borne by the parent weaving houses.[11]

The structure of the putting-out relationship between large and small weaving houses is similar to the case of Iruma or that of contemporary synthetic-fiber textiles. For a large parent weaving house, subcontracting small weaving houses are classified according to the closeness of the relationship. Some weaving houses are completely dependent on a single parent weaving house, while others have transactions with more than two larger weaving houses. Parent weaving houses tend to offer stable orders to their dependent small weaving houses, while they adjust the amount of their orders to less dependent weaving houses. The latter category of weavers transact with more than two parent weaving houses, as well as with wholesalers, in order to stabilize the orders they receive.

As in the case of cotton textiles in Iruma and synthetic-fiber textiles in Fukui and Ishikawa, this form of the putting-out arrangement allows parent weaving houses to cope with demand fluctuations. Long-term relationships between parent weavers and some small weavers are the basis for their cooperative relationships.

It is important to note that there is a wide variety of products, even in the narrow category of wool fabrics. It included not only a wide classification of male and female products, but also finer classifications, such as fashionable products and basic products, piece dying and yarn dying, mono color products and complicated pattern products, and so on. The skills needed to produce each product are different, and there is some room for specialization. We can observe specialization of each small weaver in some kind of product. Through such specialization and the putting-out arrangement, the production network can foster efficient skill accumulation and product diversity.

The wool production area of Ichinomiya has a long history in textiles. It was originally an area of cotton and silk fabric production and gradually shifted to wool fabrics. We can

thus observe historical continuity in this area, and the present putting-out system is the product of that history.

Conclusions

Comparing the two examples of the putting-out system in the contemporary textile industry with the historical case study of Iruma, we can observe some similarities. They can be summarized as follows.

- The putting-out system allows flexibility for parent firms (wholesalers). By adjusting the orders to small weavers, parent firms (or wholesalers) can change the amount of total production as well as the allocation of products.
- We can observe long-term transactional relations with parent firms and some (but not all) small weavers. The long-term relationship provided each side with incentives to be cooperative with the other, and the problem of embezzlement is mitigated.
- The putting-out system often has historical continuity, and the use of agricultural labor during the seasons of low farm activity is an important factor in the emergence of the putting-out system. As time goes on, however, and as the production area is established, small weavers tend to specialize in selected weaving activities.
- The putting-out relationship can continue while changing its contractual form substantially in response to drastic technical change, such as the introduction of new materials.
- The traditional networks of the putting-out relationship often become a nursery of modern technology firms, such as machine-manufacturing, dyeing, and printing firms. Many modern Japanese firms were nurtured by the textile industry—for example, Toyota was originally a loom-producing company.

It is surprising that a traditional industry such as textiles can survive in a high-wage country such as Japan in a competitive international market environment. Findlay and Itoh (1994) point out the importance of the domestic market for the survival of the textile industry and the role the putting-out relationship can play in the industry. Flexibility and risk-sharing capacity supported by a subcontracting system are crucial if the industry is to supply differentiated, high-quality products. It is interesting to note that a very similar reason can be given for the emergence of production areas such as Iruma.

It is dangerous to jump to the easy conclusion that the domestic market is an important driving force in the emergence of rural enterprises. We can, however, observe a similar pattern in the development of rural enterprises in other industries, such as silverware. More research should be carried out to study the distribution network in the domestic market. As explained in the discussion of Iruma, not only the putting-out relationships of the local production area but also a nationwide network of wholesalers are crucial for the emergence and growth of rural production areas.

Although the role of public support has not been examined in this chapter, it is important to note that public support, especially that of local government, played an important role in the development of local production networks. As discussed in detail in Itoh and Urata (1994), local government often played an important role in nurturing local production networks in Japan. Numerous policy measures were introduced by local government, including establishment of local industrial associations, recruitment of highly skilled engineers from other parts of Japan, and the purchase of machinery from abroad. Such local government supports did play some role in Iruma. It is an important feature of Japanese rural enterprises that a concentration of similar producers can be observed. Local public technical centers and industrial associations were often channels for technological information.

There is another area that is not touched in the chapter—the role of export in the development of local production areas. The textile industry became an important export industry for Japan, and expanding exports most certainly affected the structure of local production networks. In the case of silverware reported in Itoh and Urata (1994), the structure of the industry changed substantially when the production area shifted from traditional local production areas to an export center for the products. The Iruma production area is not a good example for this kind of study, because it disappeared when powered looms were introduced. There are, however, several production areas of textile products in Japan that grew with expanding exports.[12]

Notes

1. Because of limited availability of data, Tanimoto utilized a few different sources of business documents of the merchants and connects them.

2. Tanimoto (1992) compares two (fabric-making) production areas —one purchased cotton yarn from other producers and the other purchased cotton material and spun the yarn themselves. It was easier for the former kind of producer to switch from domestic to imported yarn; yarn merchants established in the production area played an important role in the shift to imported yarn. In the latter type of production area, where cotton yarn was produced from raw cotton, incentives to switch to imported yarn were much weaker. According to Tanimoto, this difference in approach to imported yarn was reflected in the pattern of regional industrial growth. The former expanded their share while the latter declined toward the end of the nineteenth century.

3. Nevertheless, large firms that produced both yarn and fabrics were not as important in the nineteenth century in the cotton textile industry in Japan. Their share in the total production of cotton textiles in Japan was about 5 percent in 1889. Their presence became more visible after the Japan-Russia War (1904–5), with a share of 22 percent in 1905 and 41 percent in 1914. Note that the remaining products were those of local production networks, which depended on the putting-out system.

4. For example, in a local town, Ogimachiya village market opened on the 3rd, 8th, 13th, 23rd, and 28th of every month.

5. Major agricultural products in this area were barley, wheat, tea, and sericulture, which required intensive labor input (especially female labor input in the latter two) in May, June, and July.

6. According to Tanimoto (1986), a local yarn merchant in Iruma had direct transactions with yarn traders in Tokyo.

7. As explained in the next section, however, even now we can observe various kinds of putting-out arrangements in the textile industry of Japan. Thus the shift to powered looms did not destroy the putting-out arrangement in this industry.

8. This behavior pattern is analyzed in various ways by the theory of repeated games.

9. See Itoh and Urata (1994) for the role of government support in the development of local production networks.

10. The following cases are based on Itoh and Urata (1994), for the synthetic-fiber textile industry, and on Findlay and Itoh (1994) for the wool textile industry.

11. Note that the putting-out relationship can also be observed between wholesalers and small weaving houses and between spinning firms and small weaving houses. Here, we do not discuss these putting-out systems.

12. Kikuchi (in this volume) offers an interesting case study of rural entrepreneurs who depend on the export market.

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4

The Formation of Toyota's Relationship with Suppliers:
A Modern Application of the Community Mechanism

Kazuo Wada

In 1980 Japan produced over 11 million vehicles and became the largest car-producing country in the world, surpassing the United States. *The Machine That Changed the World* (Womack, Jones, and Roos 1990) revealed that Japanese assemblers also generally bested their American and European counterparts in both quality and production costs in the 1980s. Many researchers have tried to identify the factors that contributed to the superior performance of Japanese automobile assemblers. Some have pointed to the unique approach to research and development of the assemblers and parts suppliers; others thought the "noninventory" production method was chiefly responsible for the better performance. The findings were all closely examined; some were implemented in overseas assembly plants and contributed to lower costs and improved workmanship. The Japanese automobile industry thus has provided fertile subject matter for journalists, engineers, businesspersons, and academics.

Although the topics raised by the researchers were varied, most of the research seemed to suggest a common conclusion: producing better automobiles at less cost requires a smooth and coordinated flow of information, parts, and materials between assemblers and suppliers. It is not an easy task to establish such a relationship, but most researchers admit that Japanese assemblers, especially Toyota, have better relationships with their suppliers than assemblers in other countries have managed to form. Japanese assemblers transact directly with a few suppliers for the long term. They did not build their relationships with suppliers "primarily on trust, but on the mutual interdependence enshrined in the agreed-

upon rules of the game" (Womak, Jones, and Roos 1990: 155). Nevertheless, mutual interdependence does not mean a lack of competition among suppliers, who strive to improve their own performance in order to obtain more orders from assemblers. The Japanese assemblers appear to adopt a policy of "cooperation and competition among the few." This "improved subcontracting system is now considered a major organizational innovation that underlies the strength of Japanese industries, especially the automobile industry" (Hayami and Kawagoe 1993: 172.)

As is the case for Toyota, this improved subcontracting system originated in management efforts of relatively recent years, mainly since the 1950s (Wada 1991). If Toyota had not established close personal relationships between the company and its suppliers in earlier years, however, it would have been more difficult for it to undertake organizational innovation after the 1950s and to create the present, highly sophisticated subcontracting system.

This chapter argues that in the early years of Toyota, personal connections facilitated the establishment of close relationships between Toyota and its suppliers, especially up to 1955, when Toyota marketed Crown, "Japan's first completely domestically produced passenger car" (Kato 1981: 62).

Historical Background of Automobile Manufacturing in Japan

The Nascent Years

In 1902 the first attempt was made to manufacture a motor vehicle in Japan. Shintaro Yoshida, a bicycle merchant, and Komanosuke Uchiyama, an engineer, collaborated to produce a passenger car and a bus, using foreign-made engines. Several other attempts followed.[1] Despite these efforts, as late as the 1920s, Japanese engineers could not produce automobiles on a solid commercial basis. The use of automobiles also remained very limited in Japan. This significantly changed in 1923, after a major earthquake devastated the Tokyo area and destroyed railway and other transportation networks. The City of Tokyo imported 800 Ford Model T trucks to serve as buses. The number of motor vehicles imported then jumped from 1,938 in 1923 to 4,063 in 1924 (see table 4-1). This was, in a true sense, the first acquaintance of ordinary Japanese people with motor vehicles. The large order for trucks prompted Ford to establish a fully owned subsidiary in Japan, so that in 1925, Ford of Japan began to assemble knockdown parts in Yokohama. General Motors followed suit, setting up an assembly plant in Osaka in 1927. Most of the motor vehicles were used as buses or taxis in urban areas; in major cities such as Tokyo and Osaka, they provided indispensable transportation services. By 1930 the demand for motor vehicles had increased, and the existing Japanese companies suffered from the domination of the market by American subsidiaries.

The growing demand for automobiles, including three-wheel vehicles, laid the groundwork for the emergence of automobile parts suppliers. After Ford and General Motors had

Table 4-1. Imports of Automobiles and Automobile Parts

	Automobiles			*Automobile parts*		*Total*
Year	*Number of units*	*Cash amount (A) (thousand yen)*	*A/C (percent)*	*(B) (thousand yen)*	*B/C (percent)*	*(C) (thousand yen)*
1914	94	421	62.0	258	38.0	679
1915	30	71	42.8	95	57.2	166
1916	218	387	54.2	327	45.8	714
1917	860	1,570	58.8	1,098	41.2	2,668
1918	1,712	4,525	59.1	3,137	40.9	7,662
1919	1,579	5,532	49.0	5,751	51.0	11,283
1920	1,745	4,866	46.4	5,614	53.6	10,479
1921	1,074	3,262	40.4	4,806	59.6	8,068
1922	752	2,262	30.7	5,094	69.3	7,355
1923	1,938	2,956	25.7	8,528	74.3	11,483
1924	4,063	8,773	41.4	12,414	58.6	21,187
1925	1,765	4,601	39.4	7,062	60.6	11,662
1926	2,381	5,325	33.9	10,392	66.1	15,717
1927	3,895	8,064	44.1	10,219	55.9	18,282
1928	7,883	13,771	42.7	18,475	57.3	32,245
1929	5,018	9,546	28.4	24,063	71.6	33,609
1930	2,591	4,897	23.6	15,877	76.4	20,774
1931	1,887	3,379	20.7	12,952	79.3	16,330
1932	997	2,895	19.5	11,928	80.5	14,822
1933	491	11,865	49.7	12,007	50.3	23,872
1934	896	3,358	10.4	28,946	89.6	32,303
1935	931	3,203	9.8	29,388	90.2	32,590
1936	1,117	3,578	9.7	33,459	90.3	37,037

Source: Amaya (1982).

established plants for assembling knockdown parts, they placed some orders for parts with Japanese companies. Both firms were so eager "to develop local sources of supply that they already had begun to turn over, at nominal fees, detailed specifications of desired parts to Japanese producers" (Mason 1992: 81). The annual production of three-wheel automobiles reached nearly 10,000 vehicles in the late 1930s. Parts suppliers mushroomed. The production of automobile parts rapidly grew from ¥14 million in 1931 to ¥53 million in 1935 (Amaya 1982: 67). According to a recent study, these new parts suppliers "provided an invaluable infrastructure for Nissan and Toyota" (Mason 1992: 81).

The war with China broke out in 1937, bringing significant changes to the Japanese economy. The motor vehicle industry, like other industries, fell under tight government control. In 1938 the Ministry of Commerce and Industry forbade the production of passenger cars other than for military use, and vehicle production concentrated on trucks, which were needed for the transport of soldiers and military goods in China (Mason 1992: 81). Automobiles were included on a list of fifteen major items targeted by the government in

1938 for increased production under a four-year plan. As the war front widened, however, and especially after the confrontation with Great Britain and the United States began in 1941, the strategic status of motor vehicles declined. Aircraft, rather than trucks, became a major priority, especially in the fight against the United States.

Toyota's Struggle to Become Established

EXPERIMENTAL DAYS. The growing demand for automobiles in the late 1920s and early 1930s also stimulated some entrepreneurs to consider entering the business of automobile manufacturing. One such entrepreneur was Kiichiro Toyoda, the founder of Toyoda Automobile Company. Kiichiro was the son of Sakichi Toyoda, a famous automatic loom inventor, who established the Toyoda Automatic Loom Works, Ltd., in 1926. Sakichi was the son of a carpenter and received no systematic engineering training. He carefully investigated imported looms; at first he imitated them, but then he moved on to invent the high-standard power looms. Even Platt Brothers in Great Britain, one of the largest loom-makers of the time, wanted to purchase the patent rights to the automatic loom Sakichi invented, and it started to negotiate with the Toyoda Automatic Loom Works, Ltd. In 1929, when he visited England to conclude patent negotiations with Platt Brothers, Kiichiro Toyoda was impressed by the large number of automobiles he saw on the streets. Platt Brothers paid £100,000 to Toyoda Automatic Loom Works, Ltd., for the patent rights to manufacture and sell the automatic loom invented by Sakichi Toyoda.[2] This fee gave Kiichiro the financial base he needed to begin manufacturing automobiles. Even before obtaining the fee, Kiichiro had purchased many precision machine tools that were not required to manufacture textile machinery. After obtaining the fee, he was able to amass the tools and learn the technological skills needed to manufacture automobiles at a greater speed than his contemporaries.

The Toyota Automobile Company started out as the Automobile Department of the Toyoda Automatic Loom Works in 1932, and it became an independent company in 1937. Even before the board of directors of Toyoda Automatic Loom Works formally endorsed the plan for manufacturing automobiles in 1933,[3] Kiichiro Toyoda had started to carry out research. In 1930 he had begun experimenting with the manufacture of gasoline motors. He and his staff learned by taking motorcycles apart. In the summer of 1933 they at last succeeded in manufacturing a four-horsepower gasoline engine (Toyota Motor Company History Editorial Committee 1958: 25).

Kiichiro organized a group of engineers and stocked up on machine tools at the company, but he needed engineers with automotive experience and invited, for example, Takatoshi Kan to join the company. Kan had participated in a pioneering automobile manufacturing project, the "Chukyo Detroit Project," which was an attempt to establish the Chukyo area around Nagoya as a center of automobile production, just as Detroit was in the United States. The project was abandoned because it was not economically feasible. Kan was then one of only a handful of engineers with experience in manufacturing automobiles.

Kiichiro still faced an uphill struggle. He had to produce a prototype car as soon as possible. At the same time, a plant for manufacturing automobiles had to be set up. Kiichiro carried out two surveys of parts suppliers for automobiles in 1931 and 1933. Although there were established parts suppliers, and their production schedules had grown, he decided that the quality of parts made in Japan was poor, primarily because of inferior steel. This prompted him to set up a steel manufacturing department within Toyoda Automatic Loom Works in 1934.[4]

In May 1935 the company managed to produce a prototype passenger car. It had taken at least two years to produce the prototype from the time the company had formally embarked on the business of manufacturing automobiles. Nevertheless, the prototype was not "purely domestic-made"—it was constructed using many Chevrolet parts. Kiichiro and Kan intentionally took this approach because the company could not, either financially or technically, produce every part. Because their survey of parts-makers had revealed the poor quality of parts made in Japan, in order to shorten the time required to make the prototype car and to make it possible to use reliable, genuine Chevrolet parts, they intentionally designed their prototype to have the same size parts as those used in Chevrolets and Fords. This design strategy smoothed the way for them to start their automobile business. The flaw in their plan, however, was that some of the parts in their cars had been made in Japan, and these caused breakdowns in the early days. As a result, Toyoda had to begin producing parts in its own plant.[5] This experience later prompted Toyoda to be demanding when it began training its suppliers.

THE "PASTORAL FACTORY": KOROMO PLANT. When Kan moved to the Toyoda Company in 1933, Kan and Kiichiro started to draw up plans for a pilot plant, which later was known as the Kariya plant. The obstacles seemed to be insuperable: they had little detailed knowledge of the automobile production process, or the processes or materials involved in making parts.

Kan went to the United States to purchase machines for the Kariya plant in January 1934. In accordance with instructions from Kiichiro that he visit a number of factories, he visited the Ford, Chrysler, and Graham Paige factories during his five-month stay. Kan observed their operations carefully, analyzing the manufacturing process and the flow of production. In March of 1936, Kiichiro Toyoda directed Kan to design a second plant. The result was the Koromo plant, which began operations in November 1938 with the capacity to produce 2,000 cars each month. This factory encapsulated Kan's observations of the American manufacturers' production methods and Kiichiro's ideas about auto manufacturing.

Koromo, where Toyota decided to build this new assembly plant, was far from being an industrial area with a large number of parts suppliers or engineering and machining firms (see figures 4-1 and 4-2). At the end of 1936, Aichi Prefecture, where Koromo was situated, had 9,677 factories that employed 5 or more workers (not including 11 public works). A breakdown by industry shows that Aichi Prefecture specialized in the spinning and weaving, machine-tool, and ceramic industries (see table 4-2). Nagoya, the prefectural capital, had 4,265 of these factories, or almost half the total, in 1936. In Koromo there were just

Figure 4-1. Population Density of Aichi Prefecture, 1915

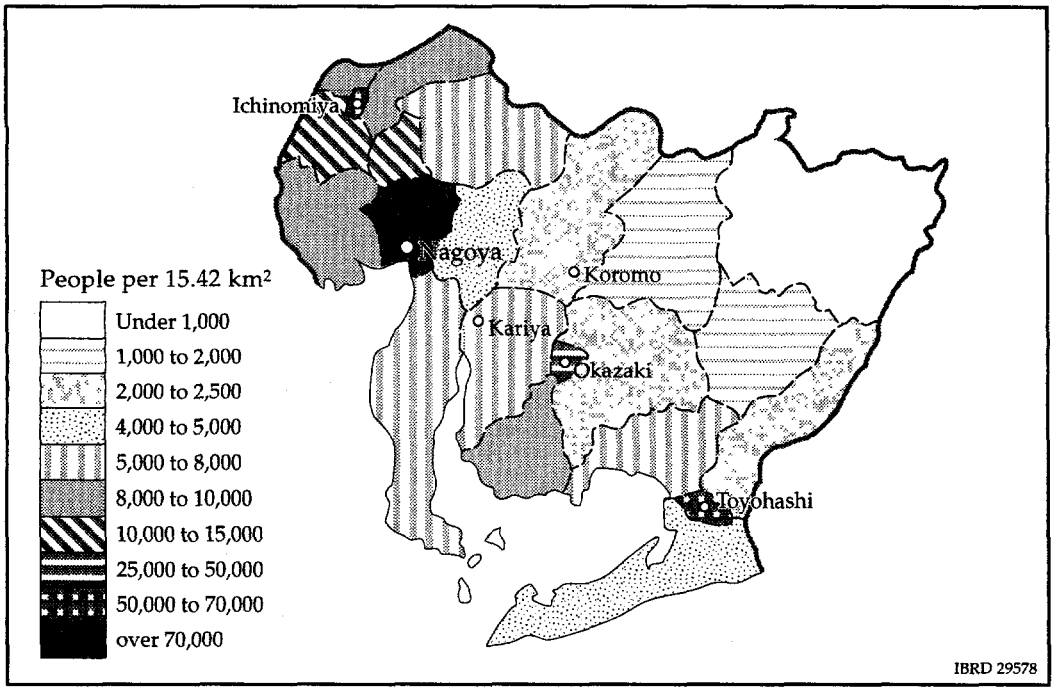


Figure 4-2. Distribution of Factories in Aichi Prefecture, 1936 (factories employing fewer than 5 people are not counted)

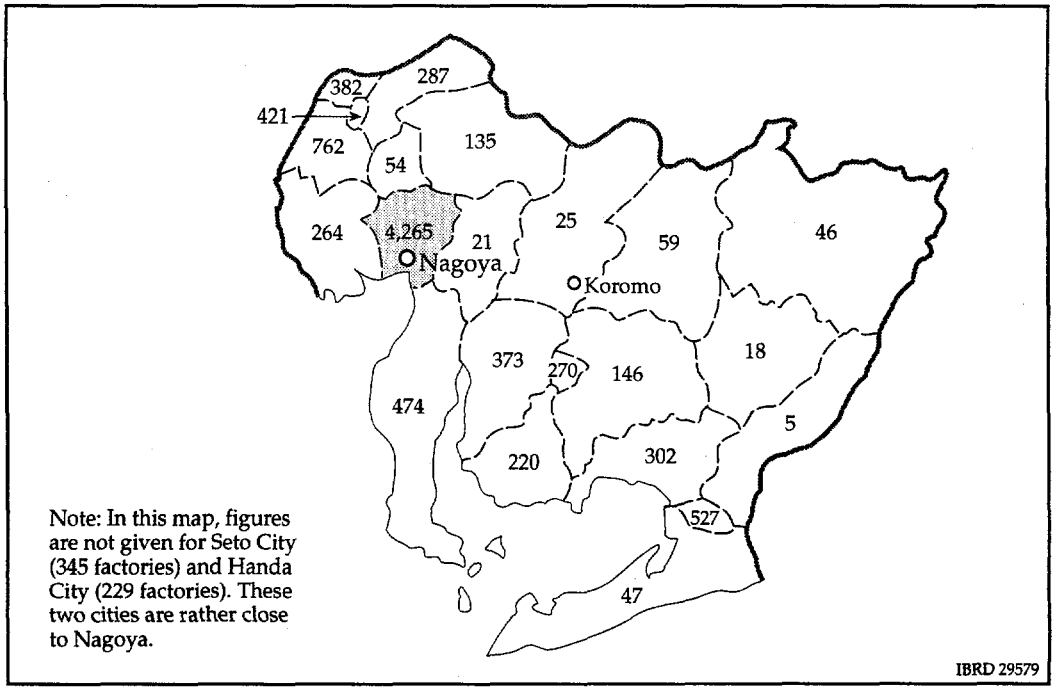


Table 4-2. Aichi Prefecture's Industrial Structure at the End of 1936

	Factories		*Employees*	
Industry	*Number*	*Percentage of total*	*Number*	*Percentage of total*
Spinning and weaving	4,211	43.6	131,298	49.8
Metal	454	4.7	8,330	3.2
Machine tools	1,001	10.4	50,872	19.3
Ceramic	1,007	10.4	25,366	9.6
Chemical	194	2.0	13,271	5.0
Woodworking	766	7.9	10,542	4.0
Printing	243	2.5	3,772	1.4
Food	784	8.1	9,232	3.5
Gas and electricity supply	15	0.2	473	0.2
Other	992	10.3	10,717	4.1
Total	9,667	(100)	263,873	(100)

Source: Aichi Prefecture, Department of Statistical Survey (1937).

seven factories (Aichi Prefecture 1937: 286-88), which were engaged in traditional occupations such as brewing sake. After the 1880s, sericulture began to develop in this area, and Koromo became a cocoon-trading center. Before the Koromo plant came into operation in 1938, the town's main products were related to agriculture and sericulture (see table 4-3).

Why did Kiichiro choose Koromo as the location of an assembly plant? The town clearly offered attractive conditions to Toyota (Toyoda Automatic Loom Works 1967: 215–16). As the development of artificial silk began to depress the sericulture industry and bring down the price of cocoons, the town of Koromo had an incentive to attract new plants to the area. It was easier and less expensive to purchase a large piece of land in such a rural area than in a more densely populated area. In addition, the infrastructure had been greatly improved. In 1930 the Ministry of Railways opened Japan's first bus route in the area, and the route ran through Koromo. A local railway also began operating from Okazaki to Koromo

Table 4-3. Changes in Products at Koromo

Category	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*	*1939*
Product (percent)							
Agricultural	31.6	29.8	29.6	30.6	31.8	6.4	3.1
Sericultural	51.2	47.9	54.9	53.4	46.1	9.3	1.8
Manufacturing	7.6	9.8	6.3	6.2	10.7	81.5	93.8
Total products (1,000 yen)	2,779	2,359	3,248	3,643	3,437	18,894	56,513
Value per inhabitant (yen)	189	158	222	245	217	1,019	2,685

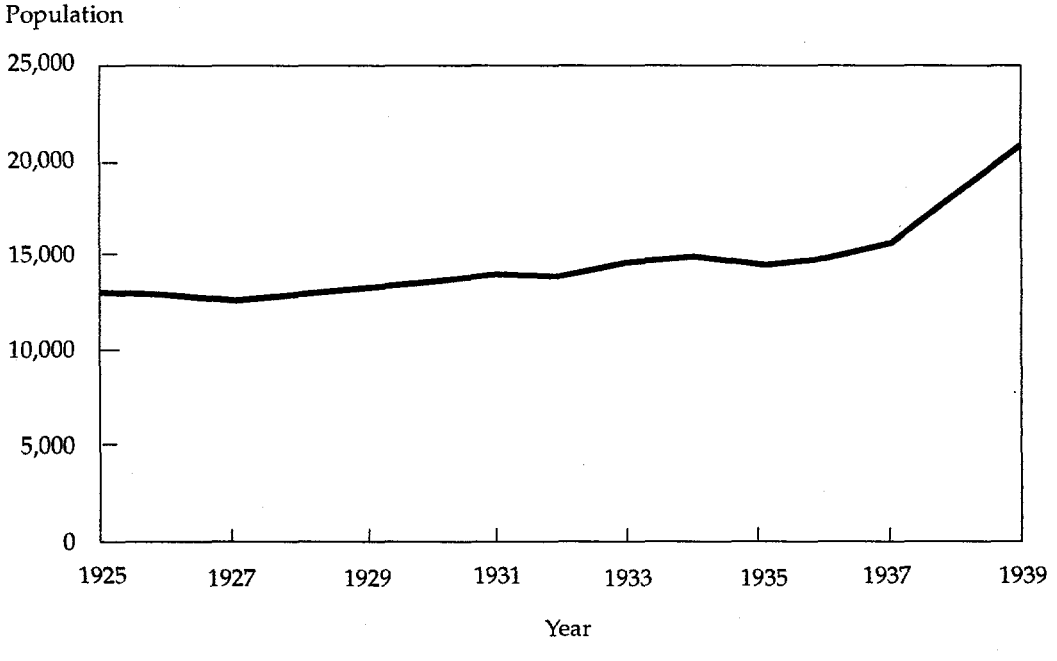
Source: Watanabe and Koide (1953: 131).

in 1934. Such improved transportation facilities could easily have persuaded Kiichiro to build his assembly plant in Koromo.

The idea of establishing an assembly plant in such a rural area was surely based on economic calculation—on the possibility of hiring cheap labor as well as being able to purchase a large tract of land at a low price. Nevertheless, setting up an assembly plant in such an isolated area meant that Toyota could not employ the specially trained manual workers easily found in urban areas. It is possible that Kiichiro preferred to employ untrained workers at his plant, rather than workers who already had been trained. Kiichiro called the Koromo plant a "pastoral factory," one that encapsulated his ideal of "training unspoiled persons who had been brought up in rural districts, and producing inexpensive and good-quality cars on a large scale" (Toyoda 1937). He may have recognized the advantages of a rural base after to his experience in Kariya, the site of the Toyoda Automatic Loom Works plant. It is possible that Kiichiro made room in his plans for taking Koromo-trained workers. Kiichiro also had a ready supply of workers for the automobile manufacturing operations in his Kariya plant; because Koromo was not far from Kariya, workers were transferred to the Koromo plant.

The establishment of the plant in this rural area also provided nonfarm employment to the local labor force, and later stimulated an influx of labor from other areas. Koromo's population increased rapidly after the opening of the plant, from 15,821 in 1937 to 18,541 in 1938 (a 17 percent increase in one year; see figure 4-3). The industrial structure at Koromo also shifted from agriculture to (automobile) manufacturing (see table 4-3).

Figure 4-3. Population Growth at Koromo, 1925–39



Supplier Characteristics in the Early Years

Setting up the assembly plant far out in the countryside meant there were no parts suppliers around the plant; those nearest supplied the Toyoda Automatic Loom Works. As a result, Toyota relied mainly on parts purchased from firms in the Tokyo and Osaka areas. In addition to those suppliers, Toyota also placed orders with existing suppliers of its Loom Works. Further, some entrepreneurs tried to seize the opportunities created by the new Toyota project.

In 1939 Toyota's suppliers formed the *Kyoryoku-kai* (Cooperative Association),[6] which was an annual, convivial gathering of Toyota and its suppliers. Toyota's official history lists the names of eighteen suppliers at that time.[7] There is some doubt whether all were original members of the Kyoryoku-kai, but being listed in the company history means they were all regarded as important Toyota suppliers. Most continue as parts suppliers in the Aichi area.

Nagoya City's 1936 directory of local manufacturers lists five of these firms. (Directories published in later years may list more firms, but they do not contain rich information on individual firms because of the secrecy imposed on such information in the wartime economy.) Apparently these five firms did not produce only automobile parts.

Hamakichi Kojima was a good example of the entrepreneurs who jumped at the opportunity to enter the automobile-related business. According to an anecdote, he decided to manufacture automobile parts soon after the newspapers reported that the government had passed the automobile industry law of 1936. At that time he successfully ran a small factory manufacturing traditional small household wares such as portable body warmers. The manufacture of a portable body warmer required the stamping of tin plates, but his machines could not stamp harder metals such as steel or iron. Also, the manufacture of body warmers did not require making parts with high precision. The stamping capabilities of his firm obviously fell far short of the standards needed to manufacture automobile parts.

In spite of his factory's poor technical capability, Kojima was determined to enter the automobile-related business because he believed automobiles would have a big market in the near future, given the way their use was spreading in Tokyo. He managed to meet Kiichiro, who gave him an order for buckets (Kojima Stamping Company 1988). The buckets were used to store sand on the running boards of vehicles, because sand had to be spread in order to increase friction when vehicles were driven up steep, slippery slopes. In this way, automobiles with poor horsepower managed the steeply inclined roads so prevalent in Japan at the time. The bucket itself had nothing to do with the mechanical functions of automobiles, but the item was very important in giving Kojima a toehold in the business. The next item Toyota ordered from Kojima was washers. According to the company's history, Kojima could not understand the design drawings of automobile parts, and he even found it difficult to understand some English technical terms. The local directory for 1936 described Kojima's firm as a manufacturer of portable body warmers and automobile parts that employed fifteen workers and was able to boast of a one-horsepower elec-

tric motor. This shows that by the end of 1936, Kojima had managed to enter the business of making automobile parts. Gradually Kojima's firm expanded the range of its products, mainly into small parts such as washers. It would seem that Toyota was training Kojima and enabling him to upgrade his company's technological capability. When the Koromo Plant opened in 1938, Kojima also built a new and much larger factory and shifted its product lines substantially toward automobile parts. Kojima's determination was bearing fruit, thanks to some assistance from Toyota.

The Kojima Stamping Company typifies Toyota's attitude toward newcomers that wanted to enter the automobile parts business and were willing to follow Toyota's technical assistance. There is no doubt that Toyota could have placed orders with specialized, city-based engineering firms. This may have been much easier, and the parts less expensive, because there would have been no need to render technical assistance to an established firm. Nevertheless, Kiichiro continued to place orders with Kojima and to nurse his company along as an automobile parts maker. This suggested that Kiichiro preferred to develop tight relationships with unestablished and, hence, trainable manufacturers with a strong willingness to follow his advice and guidance.

New suppliers with the determination and openness of Hamakichi Kojima did not appear in large numbers. His was an exceptional case. The other parts suppliers whose names appeared in the directory of 1936 were suppliers to Toyoda Automatic Loom Works or makers of parts for looms, airplanes, and bicycles.

Meido Iron Company, a screw manufacturer, traded with the Toyoda Automatic Loom Works through an agent at first, but in 1932 began trading directly with Toyoda Automatic Loom Works. Meido Iron's official company history says: "In response to a rapidly increasing demand for screws for automobiles, the company started direct dealings with Toyoda Automatic Loom Works" (Meido Iron Company 1974: 34). In 1932 Meido Iron also decided to establish a new plant, completed in 1935, the same year Toyoda Automatic Loom Works established the Kariya plant as a pilot plant for manufacturing automobiles (Meido Iron Company 1974: 34).

Other companies mentioned in Aichi Prefecture's directory of 1936 were the Hayashi Spring Manufacturing Company, which produced springs for looms as well as for automobiles and employed eighty-four; Niwa Iron Company, which employed forty-one people and manufactured parts for airplanes, looms, and automobiles; Kato Iron Company, which manufactured parts for bicycles and automobiles and employed twenty; and Tsuda Iron Company, which, according to the directory, only produced parts for looms but was situated in Kariya, where the Toyoda Automatic Loom Works was located.

The above six firms did not have any experience in manufacturing parts for the Ford and General Motors subsidiaries in Japan. Some members of the Kyoryoku-kai were forced to enhance their technological capabilities, as in the case of the Kojima Stamping Company. It is also worth noting that none of these parts-suppliers was a large firm. Once the production of automobiles at Toyota started, they had to expand their manufacturing capacities or build new plants, as the Meido Iron and Kojima Stamping companies did. Toyota often had to lend technical support to these firms because of its decision not to rely on

larger engineering companies with more sophisticated technical capabilities. But providing technical assistance to its suppliers meant that Toyota was able to accustom them to Toyota's way of doing things and its demanding specializations without having to exert strong pressure or sanctions. This made it easier to improve the flow of information couched in a common terminology, and to build strong personal ties between Toyota and its suppliers. It should not be overlooked that the relations between Toyota and its suppliers took shape on the basis of very close personal dealings, especially in the nascent years.

Tightening the Relationship

In 1940 Toyota made a significant decision regarding purchasing policy. The company decided to reduce the number of parts in order to reduce costs by "giving consideration to the geographical distribution of suppliers" (Toyota Motor Company History Editorial Committee 1967: 180). It greatly reduced the number of items ordered from the Tokyo and Osaka areas, reducing orders from the Nagoya area only slightly (see table 4-4). This would suggest Toyota's disappointment with the technological levels of its existing suppliers. Toyota's official history cites the internal report on purchasing policy, which explains why Toyota had to launch its new purchasing policy. It was, the company explained, entirely based on its own detailed estimate of costs, and was adopted so that Toyota could make a profit from its automobile manufacturing business. Even though the Kyoryoku-kai had been formed only a few months before, and this policy change would inevitably cause some tension among suppliers, the company still went ahead with it. The Kyoryoku-kai was organized for the purpose of fostering close personal ties, but Toyota also needed inexpensive and good-quality parts if it was to place the business of manufacturing automobiles on a solid basis.

Table 4-4. Proposed Changes in Purchasing of Parts

	January 1940			*Proposed target*			*Proposed changes*		
Area	*Number of purchased items [A]*	*Value per car (yen) [B]*	*Value per unit of part (yen) (B/A) [C]*	*Number of purchased items [D]*	*Value per car (yen) [E]*	*Value per unit of part (yen) (E/D) [F]*	*Reduced items (percent) (D/A)*	*Reduced value per car (percent) (E/B)*	*Reduced value per unit of part (percent) (F/C)*
Nagoya	366	764.12	2.09	300	500	1.67	82.0	65.4	79.9
Osaka	104	273	2.63	50	100	2	48.1	36.6	76.0
Tokyo	100	1,888.4	18.89	30	400	13.34	30.0	21.2	70.6
Total	570	2,925.52	5.14	380	1,000	2.64	66.7	34.2	51.4

Source: Toyota Motor Company History Editorial Committee (1967: 180).

Table 4-4 reveals an interesting fact: Toyota purchased more than half the items for assembling automobiles in the Nagoya area, but the total value of the parts purchased from that region was far below the value of parts from the Tokyo area. Even the proposed changes to its purchasing policy meant that Tokyo-area suppliers were receiving more money per part than those from the Nagoya and Osaka areas. As of January 1940, the average value per part for each car was about ¥19 for Tokyo-area suppliers; ¥2.6 for Osaka-area suppliers; and ¥2.1 for Nagoya-area suppliers.[8] The technical capabilities of the Nagoya-area suppliers were not as great as those of their counterparts in the Tokyo area, and hence they were not involved in producing expensive parts.

The purchasing policy proposed in 1940 meant that the Tokyo-area suppliers' share of Toyota's business would be greatly reduced in both items and value. Nagoya-area suppliers would gain an increased share, although the value per item would still remain around ¥2. What the proposed purchasing policy showed, therefore, was Toyota's intent to rely on in-house manufacturing of expensive items, for the more inexpensive items Toyota remained relatively reliant on out-sourcing, especially with Nagoya-area suppliers.

Government policy also had a significant effect on Toyota's dealings with suppliers. After the Ministry of Commerce and Industry forbade the production of passenger cars for nonmilitary use in 1938, the government more or less coopted the suppliers producing good-quality parts, and in 1939 it persuaded these suppliers to organize themselves into an association. In 1940 the government circulated a "Notification Regarding the Organization of the Automobile Parts Industry," which resulted in the establishment of the Automobile Parts Association of Japan in 1942, with a membership of 305 firms. The government tried to force each supplier it had certified as qualified to produce parts at an acceptable level of quality to specialize in manufacturing one kind of part. This chain of events forced Toyota to deal with a smaller number of suppliers.

The shortage of steel, however, would have an even greater impact on supplier relationships at Toyota. The government decided to allocate steel in accordance with its priorities in the war effort. Motor vehicles had originally been included among the fifteen priority items targeted for increased production under a four-year plan announced in 1938, but as the battlefront expanded, especially after 1941, aircraft took over as a more strategic item in the war effort, especially for use against U.S. forces in the Pacific. The government ordered aircraft production to be increased as much as possible, giving planes priority over trucks. As a result, suppliers at Toyota found it increasingly difficult to get the steel and other materials needed to manufacture truck parts. This resulted in a reorganization of the Kyoryoku-kai. In 1943 the Kyoryoku-kai changed its name to the Kyoho-kai, and through this organization Toyota distributed materials to individual affiliates. Hamakichi Kojima was elected the first chairman. Suppliers, in cooperation with Toyota, allocated the available steel. As a result, the Kyoho-kai itself came to play an important role in automobile production, although obtaining steel became more and more difficult. Toyota and its suppliers were motivated to cooperate closely under the difficult conditions caused by the steel shortage. This experience built close personal ties among the suppliers and between the suppliers and Toyota, which in turn made it easier for them work closely within the

Kyoho-kai. In this sense, the wartime experience was an important factor in the creation of today's relationships between Toyota and its suppliers.

Reorganization of the Kyoho-kai

The end of the war and the postwar upheaval disrupted the activities of the Kyoho-kai. In a meeting with suppliers in 1946, however, Kiichiro Toyoda expressed his keen desire to establish an automobile industry in Japan. He stressed that this would require the establishment of a parts industry, and that Toyota and its suppliers had a common destiny. Soon after the meeting, Toyota reorganized the Kyoho-kai into three regional districts: Tokyo, Osaka, and the Tokai district, including Nagoya (Toyota Motor Company History Editorial Committee 1967: 253–54). Suppliers in the Tokyo and Osaka districts were larger enterprises that were rather independent of Toyota, while the Tokai district suppliers were comparatively small-scale and sold their products almost exclusively to Toyota (Toyota Motor Company History Editorial Committee 1978: 150–51). For Toyota, therefore, establishing a parts industry meant ensuring the stability and growth of suppliers in the Tokai district, so that in order to improve the quality of parts and establish a reliable parts industry, Toyota's first managerial efforts had to be directed at helping the Tokai suppliers. This reorganization of the Kyoho-kai symbolized a new era in the relationships between Toyota and its suppliers. The strong personal ties, both among suppliers and between Toyota and the suppliers, that were nurtured during the war remained firm, and they facilitated the task of building a coherent organization.

For some years after the war, Toyota's annual production remained low: 6,703 vehicles in 1948 and 10,824 vehicles in 1949.[9] To make matters worse, massive labor problems erupted at Toyota in 1950, and the company stood on the brink of bankruptcy. The crisis led to the resignation of Kiichiro Toyoda and to the separation of Toyota Motor Sales Co., Ltd., from Toyota Motor Co., Ltd.[10] After Kiichiro Toyoda's resignation, Taizo Ishida was appointed president in July 1950. At the end of the same month, Toyota received its first special procurement order—for 1,000 vehicles—from the U.S. military, with several repetitions of the order to follow in the next few months (Toyota Motor Corporation 1988: 104–11).[11] The orders contributed a great deal toward putting the Toyota enterprise back on a sound footing, and the revenue derived from the procurement orders helped to rebuild and modernize production facilities.

In 1951 Toyota formulated its first long-term, five-year scheme for modernizing production facilities. At this stage, the company still could not afford to provide direct managerial guidance or technical instruction to suppliers. Its purchasing department, with a staff of only forty, was fully engaged in ordering and receiving parts, and it could not respond to requests from suppliers for technical support (Aichi Prefecture, Industry and Commerce Department 1953: 3).

The first attempt to modernize management practices among suppliers came not from Toyota but from the Small and Medium Enterprises Agency. After its establishment in

1948, the agency tried to modernize small and medium-size enterprises and undertook a variety of examinations of their business practices for their benefit (Ministry of International Trade and Industry 1963: 646). The agency extended these measures to include groups affiliated with larger firms and their suppliers. Its program was called "*keiretsu* diagnosis." Toyota and its twenty-one suppliers in the Tokai district were beneficiaries of the agency's program in 1952 and 1953.

A few officials of Aichi Prefecture carried out this *keiretsu* diagnosis; they visited each plant and recommended improvements in management capabilities. They looked through the plant, collected data on management practices, and interviewed employees as well as employers. They devoted a few days to observing and advising each supplier. Most of the suppliers they visited were small-scale, employing under 100 people. The suppliers' management practices were haphazard rather than systematic: some did not keep accounting records properly and did not know (at least not exactly) whether their companies were making a profit or posting a loss until the accountants visited them once a year to produce a balance sheet. *Keiretsu* diagnosis was a good opportunity for suppliers to learn basic management techniques and acquire other useful knowledge. One official recalled that suppliers were very skeptical, and sometimes fearful, about the diagnosis at first, but they became helpful once they realized how useful it was in improving productivity (Kyoho-kai History Editorial Committee 1967: 24). The suppliers eventually were very appreciative of the diagnosis, and to express their gratitude they donated a bus to Aichi Prefecture (Kyoho-kai History Editorial Committee 1967: 25).

At the end of each investigation, the officials produced a report based on their observations, which they then gave to the supplier. The report would describe the weaknesses and strengths of management and suggest ways to improve the productivity of the plant. The report would also grade each supplier on management, production, labor, marketing and purchasing, finance, accounting, and research. This grading system was rather simple, but apparently Toyota had not undertaken such a grading procedure before the *keiretsu* diagnosis was carried out.

After the suppliers were visited, the officials produced a final report on the relationship between Toyota and its suppliers. This final report was read at a meeting at Toyota headquarters in the spring of 1953. Senior government officials as well as suppliers were present. The officials disclosed their findings and recommended a number of ways the relations between Toyota and its suppliers could be improved. They also produced a table in which the suppliers were given point grades.[12] Although the suppliers' names were not mentioned, each supplier received a separate report on its plant and knew its own grading points. Individual suppliers were thus easily able to see how they ranked. Suppliers with lower grades received a strong stimulus to improve their management skills and raise their performance—the fear that they might start getting fewer orders from Toyota.

The *keiretsu* diagnosis also taught Toyota a lesson in how to advise, monitor, and grade its suppliers (Kanto Kyoho-kai History Editorial Committee 1976: 32). Up to that time, Toyota apparently had no monitoring system at all. After the diagnosis, Toyota's staff began to visit suppliers often and to check their manufacturing processes closely. In October

1953 Toyota decided to introduce quality control into every manufacturing process, establishing a committee in charge of quality control. Toyota also asked suppliers at the annual meeting of the Kyoho-kai to introduce quality controls in their plants. In response to this request, the Kyoho-kai organized seminars on quality control. Toyota sent its own personnel to the seminars to act as instructors and, following the seminars, Toyota's staff would visit supplier plants to observe how the suppliers implemented quality control and to give advice if needed (Wada 1991). In view of Toyota's apparent lack of advice and monitoring for suppliers before the *keiretsu* diagnosis experience, this course of action showed a remarkable change in attitude.

After the *keiretsu* diagnosis, the character of the Kyoho-kai changed greatly. The Kyoho-kai had been a convivial gathering, a time for making or renewing contracts and explaining news and views on an informal basis. After the diagnosis, however, the suppliers started visiting one another's factories and studying how to rationalize procedures. The suppliers also established several study groups within the Kyoho-kai. As someone remarked, "The activity of the Kyoho-kai really began only at this time." Suppliers became serious about striving to rationalize and improve their management (*Kyoho News*, January 5, 1967). It was the grading of the suppliers in the final report that drove them, especially those rated lower in the table, to work harder. They realized that Toyota would be carefully monitoring their efforts to rationalize plant procedures. Thus, a sense of competitiveness emerged among the suppliers.

In 1955 Toyota marketed the Crown, "Japan's first completely domestically produced passenger car" (Kato 1981: 62). In 1956 it also introduced a "supermarket system" in its plants, the forerunner of the "just-in-time method," and suppliers brought some of their parts directly to the assembly line (Ohno 1978: 49–51; Shingo 1981: 136–37, 256–57). Toyota could not have introduced such practices if its suppliers had not been striving so hard to rationalize after the *keiretsu* diagnosis experience.

Conclusions

The interfirm relationships between Toyota and its suppliers contrast greatly with those of American automobile manufacturers and their supply sources. Managerial efforts by both Toyota and its suppliers, and also the interactions between them, are what have shaped interfirm relations at Toyota over a long period.

When the *keiretsu* diagnosis was carried out, Toyota seized the opportunity to create an atmosphere of competition among its suppliers and to monitor them. Personal ties created before and during the war helped smooth the way for the factory tours conducted by the suppliers themselves after the diagnosis and encouraged them to compete with one another in a friendly rivalry. Without a mutual trust based on personal ties among suppliers, as well as between the suppliers and Toyota, the diagnosis could not have produced such good results. If Toyota had tried to stimulate competition among the suppliers by hinting at their competitors' ratings, and if the suppliers could not count on Toyota to provide

good business opportunities for them, the suppliers would have stopped dealing with Toyota. And if the suppliers had felt that Toyota was merely abusing its authority, they would have looked for more attractive business opportunities with other companies rather than engaging in cutthroat competition among themselves to obtain more orders from Toyota.[14]

Trust was created between Toyota and its suppliers as a result of personal ties, but the long-standing business relationship that survived wartime government controls, a steel shortage, and the grading points of the company's venture into a new business provided both sides with the opportunity to test the strength of that trust. In a sense, Toyota's success was based on the creation of a community of suppliers according to the image of the traditional village communities pervasive in Japan.[15] While entry into this community was not easy, competition among the small number of suppliers was extremely intense because it was driven not only by short-run profit, but also by the praise or disgrace each member would face depending on its performance. Thus, this community mechanism of "cooperation and competition among the few" has proved to be instrumental in the development of the highly efficient production system that enabled Toyota to achieve supremacy in the world automobile industry. It is considered a prime example of how an "apparently modern" agrarian organization can be transformed into the basis of a modern, high-technology production system.

Notes

1. On the earliest attempts to assemble automobiles in Japan, see Japan Automobile Association (1965).

2. The patent rights covered all countries except Japan, China, and the United States. On this deal, see Taniguchi (1992).

3. In January 1934 a special meeting of shareholders formally approved the company's entry into the business of manufacturing automobiles.

4. This department became an independent firm in 1940, the Aichi Steel Company.

5. On the development of the relationship between Toyota and its suppliers, see Wada (1991).

6. The historical outline of Kyoho-kai is based on Kyoho-kai History Editorial Committee (1967).

7. Professor Yochio Ohba recently suggested that there were thirty-one original member companies in the Kyoryoku-kai. According to his list, just seven of the thirty-one suppliers were located in the Tokyo and Osaka areas; the rest, the large majority, were found in Aichi Prefecture. The list produced by Ohba, however, does not include all the suppliers listed in the official history. See Ohba (1990).

8. It must be acknowledged that the greater distance between the Koromo Plant and Tokyo explains some of the differences in average purchase prices between the Tokyo and Nagoya areas, yet there was not a wide difference in the average purchase prices between Nagoya suppliers and Osaka. This suggests that the distance factor alone cannot explain the differences in the average prices among the three areas' suppliers.

9. On the annual production of Toyota, see the Appendixes of Toyota Motor Corporation (1988).

10. Both Toyota Motor Co., Ltd., and Toyota Motor Sales Co., Ltd., remained independent until they merged again to become Toyota Motor Corporation in 1982.

11. The special procurement orders ended in March 1951.

12. The individual suppliers' grading points are reproduced in Wada (1991: 32).

13. The expanding volume of sales of Toyota cars was helpful in this regard. After 1955, and especially during the late 1960s and 1970s, Toyota and other Japanese car assemblers enjoyed a rising demand for passenger cars. Under this expanding market, most suppliers could increase their sales in absolute terms, although they might reduce their own share of the total parts-purchasing of Toyota. In order to increase their own share in the long run, suppliers competed with each other. Because Toyota did not greatly change its purchasing volume for a specific supplier annually, suppliers could collaborate too, especially in such a growing market. On the observation of suppliers' relationships, see Womack, Jones, and Roos 1990: 154–55.

14. John Kay identifies the importance of the "need to establish trust and penalize opportunism in a network of relational contracts." He defines the "relational contract" as follows: "An exchange relationship between two parties which is not fully articulated. The rules of behavior are implicit and the enforcement mechanism is the value of the continuing relationship between two parties." This is the very case to Toyota (see Kay 1995: 84).

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Part II. Current Developments in East Asia

5

Export-Oriented Garment Industries in the Rural Philippines

Masao Kikuchi

Although political and social unrest rendered the 1980s a lost decade for economic development, the Philippines is now vigorously pursuing the development path for industrialization taken by its ASEAN (Association of Southeast Asian Nations) counterparts. In government development strategies, industrialization is being pursued by the promotion of export-oriented, modern manufacturing industries, mainly through efforts to attract foreign investment and by the promotion of small- and medium-scale industries, especially in rural areas (National Economic and Development Authority 1992). The latter is of particular importance because it is imperative that the country eradicate rural poverty by providing productive employment opportunities for the overflowing rural labor force, while avoiding overcongestion in urban slums.

Past industrialization efforts in the Philippines were biased toward urban centers, while rural industry was left in a rudimentary state. A major reason for underdeveloped rural industry can be found in the dual structure of the Philippine society. Dualism was, and still is, a common characteristic of all Asian countries in their early stages of development, but it is especially distinct in the Philippines because of the highly skewed asset distribution, which has its origins in Spanish colonial rule. The majority of agricultural land, the most important traditional production asset, has been owned by a landed oligarchy in the peasant as well as plantation sectors, with many tenants and agricultural laborers on one

I am deeply grateful for the invaluable assistance rendered by Nelly Fortuna and Wolly Tan during the field surveys of this research. I also thank all the garment factory owners, managers, and sewers who were interviewed during the surveys. My appreciation also goes to the government officials whose assistance was instrumental in the collection of information for this study.

side and a small number of landlords on the other, the former residing in rural villages and the latter in cities. Resnick (1970) has clearly shown that the opening of the Philippines to the world economy around the turn of the century under the American colonial regime led to rapid economic development that was based mainly on the expansion of such export-oriented plantation crops as sugarcane and coconut, at the expense of household industries in rural villages.

Since the colonial period, the rural areas of the country have been predominantly agricultural; rarely were they the site of industrial activities.[1] Exceptions to this pattern have been sporadic agro-based industries, such as sugar-processing factories and coconut and rice mills, generally established by the landed elite or urban-based Chinese (including Chinese-Filipino *mestizo*) merchants who emerged as entrepreneurs under American rule. In rural areas, this dual structure of the society, or "agrarian specialization and agrarian division of labor" (Resnick 1970: 65), has remained essentially unchanged since independence in 1946.

This dual social structure may not be congruent with the promotion of rural industrialization. When agricultural surpluses are extracted by landlords, few funds are left in rural areas for investment in rural industries. More important, entrepreneurship, which is crucial for the evolution of rural industries, but has long been monopolized by a "landed-oligarchy-converted urban elite," may be nearly absent in the rural Philippines.[2] Although the degree and mode of absentee landlordism differ across regions of the country, the Philippines bear a greater handicap in the indigenous evolution of rural industries than countries such as Japan, where rural industries were initiated in the early stages of modern economic growth by a large number of entrepreneurial peasants, mostly small to medium-size landowners living in rural villages.

Nevertheless, the struggle to promote rural industries and other nonagricultural economic activities, if not overly successful, has always been a fixture of the rural Philippines (see, for example, Hayami and others 1990b). Furthermore, past land reform programs, coupled with the diffusion of green revolution technology, have contributed to keeping a significant portion of agricultural surpluses in rural villages. Such changes should have provided more favorable conditions for the emergence of rural industries. Recognizing the importance of promoting rural industries, the major questions to be asked in this chapter are:

- Is the rural entrepreneurship needed to promote rural industries present in the Philippines? If it is, who are the entrepreneurs?
- How can the entrepreneurs mobilize and organize resources, capital and labor in particular?
- How are rural-based industries economically and institutionally viable?
- What are their future prospects to transform themselves into modern industries?

These questions are approached through a case study of the garment sector in Laguna Province. This industry was chosen because, as in other developing countries in Asia, it is one of the most important, rapidly growing industries in the Philippines in number of

establishments, employment, and export earnings. More important, it is an industry found in some rural areas that employ the putting-out system. It is often said that rural-based industries enjoy advantages in mobilizing labor with low opportunity costs when adopting the putting-out system, which carries minimal labor-monitoring costs because of close community ties (see the chapter by Hayami in this volume). The rural garment industry thus provides an opportunity to examine whether the advantages postulated in the development literature exist and, if they do, how rural entrepreneurs exploit them.

Laguna, one of the provinces in Southern Luzon where many garment contractors and subcontractors are concentrated, was selected for this study. Situated southeast of Metro Manila, the province has been predominantly agricultural except in its northwest corner, which forms a corridor between Manila and all provinces in Southern Luzon and Bicol. It has rapidly been transformed into an urban/industrial area. Unlike such provinces as Batangas, where garment production was a major industry long before the garment export boom began in the mid-1980s, Laguna is a relative newcomer in this industry, so that the diffusion of the industry into rural areas and the emergence of rural entrepreneurs, if any, can be observed more clearly than in other provinces. It is also expected that the broad representation of economic activity in Laguna, from peri-urban to purely agricultural areas, makes it possible to observe different production and contract patterns in the garment sector under varying urban influences.

The Garment Industry in the Philippines

Structural Changes in the Philippine Economy and the Garment Industry

It is well-known that political instability has seriously hampered the economic development of the Philippines. During the 1980s in particular, political disturbance led to large negative growth rates. As a result of this economic regression, the level of per capita GNP (gross national product) in 1993, although significantly recovered from the low levels of the mid-1980s, was still at about the same level attained in the late 1970s.

This does not, however, mean that the Philippine economic structure has been stable. The most drastic changes can be observed in the pattern of exports (table 5-1). Until the early 1970s, Philippine exports had been dominated by primary commodities, such as sugar, copra, and copper concentrates. Since the mid-1970s, this pattern, inherited from the colonial period before World War II, has been rapidly and radically replaced by one dominated by industrial commodities. (It should be noted that this change continued even during the economic turmoil of the 1980s.) Growth rates for industrial exports in two commodity groups, electronics and garments, have been quite high. By 1990, the garment sector had become the single largest export sector of the country, surpassing electronics.[3] Export-oriented industrialization proceeded as in other developing countries in Asia.

Partly because of its strong urban bias, industry was hit hardest during the political-economic upheaval of the mid-1980s. Although the sector has recovered since hitting bottom in 1985, some manufacturing subsectors have not come back to their 1980 production levels (table 5-2). It should be noted that this recovery process was disrupted again by

Table 5-1. Changes in Export Shares of Major Product Groups in the Philippines
(percent)

Export	*1971*	*1975*	*1980*	*1985*	*1990*	*1993*
Ten traditional exports[a]	77	71	46	24	14	13
Other exports	23	29	54	76	86	87
Industrial products				58	71	n.a.
Electronics				22	19	16
Garment				13	22	20
Total	100	100	100	100	100	100

n.a. Not available.

a. Copra, sugar, bananas, logs and lumber, desiccated coconut, coconut oil, pineapples, gold, abaca, and copper concentrates.

Source: NSCB (various issues) and NSO (various issues).

Table 5-2. Gross Value Added in Manufacturing by Industry Group
(billion pesos)

Industry	*1980*	*1985*	*1990*	*1991*	*1993*	*1993/1980 (percent)*
Food manufactures	75.3	64.4	69.6	68.6	65.6	–13.0
Beverage	4.0	6.5	7.4	7.5	6.8	70.0
Tobacco	4.9	5.0	5.1	5.0	4.9	0.0
Textile	7.9	5.3	6.7	6.5	5.7	–28.0
Garments, footwear	7.2	5.7	10.0	10.7	11.6	61.0
Wood and cork products	6.4	2.8	4.1	4.0	3.5	–45.0
Furniture and fixtures	2.5	1.7	2.6	2.4	2.1	–16.0
Paper and paper products	1.7	1.5	2.2	2.2	1.8	6.0
Publishing and printing	2.3	1.4	3.0	3.0	2.8	22.0
Leather	0.2	0.1	0.1	0.1	0.1	–50.0
Rubber products	2.8	1.9	2.8	2.8	2.3	–18.0
Chemical products	12.4	10.6	11.5	12.1	11.5	–7.0
Petroleum and coal products	16.4	18.1	28.1	26.3	32.0	95.0
Nonmetallic minerals	4.6	2.7	4.6	5.0	5.2	13.0
Basic metal industries	2.7	4.4	4.9	5.0	4.2	56.0
Metal industries	4.0	2.9	4.5	4.1	4.4	10.0
Machinery	2.3	1.3	2.1	2.1	2.3	0.0
Electrical machinery	3.7	4.7	7.1	7.3	8.7	135.0
Transport equipment	5.2	0.9	1.9	1.7	2.4	–54.0
Miscellaneous manufactures	2.0	2.0	3.7	4.0	3.5	75.0
Total	168.3	143.9	182.0	180.5	181.3	8.0

Note: Figures represent 1985 prices.

Source: NSCB (various issues).

political instability during the early 1990s, when Ramo's administration succeeded Aquino's. The electric power crisis was the most serious, visible sign of adverse conditions for industry. The garment industry was one of the subsectors that recorded quick recovery by 1990. Further development—in spite of the difficulties in the early 1990s—has made this sector the third largest among the industry groups in gross value added, up from fifth largest in 1980.

Characteristics of the Garment Industry

The garment sector is the second-largest industry in numbers employed, after food manufacturing (table 5-3). Rough estimates of labor's factor share in gross value added (the ratio of wages/salaries per paid employee to average labor productivity, expressed in gross value added) indicate that the garment industry is one of the most labor-intensive manufacturing sectors. Its share is 51 percent in the case of large firms (with 10 workers or more) and 69 percent in the case of small firms, compared with an average of 24 percent for the manufacturing industry as a whole. Development of the garment industry, with it many capital-intensive subsectors, should have contributed significantly to the provision of productive employment opportunities for the growing labor force. Its relatively low capital-labor ratio (the other side of the coin from the high share of labor in gross value added), however, leads to relatively low labor productivity in the garment sector in comparison with capital-intensive industry groups. The level of wages/salaries paid to employees of large garment firms is also less than the average for large firms as a whole.

Table 5-3 also shows that the garment industry is characterized by a distinct dual structure. In 1988 there were about 1,500 large garment firms (ninety-one employees on average), while the number of small garment firms (three workers per firm on average) was more than 12,000. The difference in firm size corresponds to differences in labor productivity and wage/salary levels, which in large firms are three and two times, respectively, their levels in small firms. It should be noted, however, that the duality in productivity and wages is much less pronounced in the garment industry than in other major manufacturing sectors. For example, labor productivity in large firms in the food manufacturing industry is about ten times that of small firms, and it is nearly forty times greater in the beverage sector. Wage/salary levels differ by a factor of four in these two sectors.

Subsectors of the Philippine Garment Industry

At least three subsectors can be distinguished in the garment industry: the export, ready-to-wear (RTW), and order-made tailor sectors (figure 5-1).[4]

Exporters (also called contractors) are key figures in the export sector. They receive bulk orders directly from foreign buyers or through merchandisers (or brokers), together with design and materials. The materials—cloth, thread, and the like—are all imported, tax- and duty-free, through the Bonded Manufacturing Warehouse (BMW) of the Garment and Textile Export Board (GTEB), a government body set up in the Department of Trade

Table 5-3. Profile of Philippine Manufacturing Firms by Major Industry Group, 1988

Group	Number of firms	Employment: Total	Employment: Per firm	Employment: Percent of unpaid employees	Value of output (million pesos)	Value added ratio (percent)	Labor productivity (1,000 pesos)	Wages/ salaries per paid employee (1,000 pesos)
Large firms: Total	11,488	856,951	75	1	385,010	35	156	37
Food manufacturing	3,070	161,127	52	3	83,010	31	158	37
Beverage	103	30,249	294	0	25,189	62	516	58
Tobacco	32	14,357	449	0	16,194	53	593	36
Textile	547	89,499	164	0	19,556	31	68	28
Garment	1,556	142,160	91	1	15,210	51	55	28
Leather	120	5,167	43	2	531	39	40	22
Footwear	441	9,589	22	9	948	34	34	14
Wood and cork	682	56,433	83	1	10,936	34	67	28
Furniture and fixtures	678	41,276	61	2	3,867	43	40	20
Paper and paper products	178	15,433	88	0	10,247	35	234	44
Printing and publishing	636	20,311	32	2	4,166	40	88	34
Industrial chemicals	115	10,879	95	0	14,433	38	499	64
Other chemicals	301	29,700	99	0	30,560	40	416	88
Petroleum refineries	4	2,431	608	0	44,482	18	3,322	189
Rubber	174	26,181	150	0	8,428	37	120	43
Plastic	300	17,616	59	0	6,698	34	128	31
Pottery and earthenwear	59	5,066	86	1	786	59	91	38
Glass	35	5,776	165	0	3,313	59	309	76
Cement	17	5,893	347	0	5,582	34	326	53
Other nonmetallic minerals	353	11,219	32	3	1,990	49	86	27
Iron and steel	127	15,507	122	0	19,762	26	330	48
Nonferrous metal	35	2,618	75	1	11,937	25	1,157	55
Fabricated metal	483	21,733	45	1	5,965	32	88	29
Machinery	552	18,576	34	2	3,318	31	55	31
Electrical machinery	214	54,374	254	0	25,628	30	132	53
Transport equipment	230	14,053	61	1	8,895	28	179	42

and Industry to promote garment and textile exports. In garment production, exporters depend heavily on subcontractors working through putting-out contracts. Subcontractors often put out parts of sewing operations to additional sub-subcontractors. Finished garments are exported to foreign countries through buyers. The most popular foreign markets for Philippine garments are supermarkets and department stores that make volume sales of relatively low-quality clothes for the middle and lower classes in countries such as the United States and nations of the European Union.[5]

The numbers of these exporters and subcontractors have mushroomed since the late 1980s, supporting rapid increases in garment exports (table 5-4). There are signs that de-

Group	Number of firms	Employment: Total	Employment: Per firm	Employment: Percent of unpaid employees	Value of output (million pesos)	Value added ratio (percent)	Labor productivity (1,000 pesos)	Wages/ salaries per paid employee (1,000 pesos)
Small firms: Total	67,147	234,428	3	47	11,294	36	17	11
Food manufacturing	30,359	109,229	4	48	5,443	31	16	10
Beverage	884	2,309	3	70	31	61	14	13
Textile	1,316	3,613	3	60	98	45	12	10
Garment	12,482	31,404	3	56	886	55	16	11
Leather	209	909	4	40	122	33	44	22
Footwear	1,703	11,024	6	39	368	47	16	11
Wood and cork	2,043	8,472	4	44	391	38	18	13
Furniture and fixtures	4,077	15,519	4	44	559	46	17	11
Paper and paper products	145	760	5	46	53	35	25	12
Printing and publishing	1,522	8,136	5	27	1,455	19	33	20
Industrial chemicals	37	180	5	15	62	43	150	27
Other chemicals	115	506	4	38	48	31	29	16
Rubber	254	1,185	5	40	52	52	23	15
Plastic	83	402	5	20	39	59	56	17
Pottery and earthenwear	712	2,009	3	75	29	61	9	8
Glass	24	126	5	27	7	69	18	16
Other nonmetallic minerals	1,830	6,714	4	42	276	41	17	10
Fabricated metal	6,035	17,406	3	53	580	49	17	14
Machinery	1,277	6,388	5	25	443	51	36	20
Iron and steel	60	285	5	27	21	35	26	18
Nonferrous metal	59	238	4	56	6	62	16	14
Electrical machinery	63	232	4	32	14	55	32	19
Transport equipment	283	971	3	38	57	49	28	14
Grand total	78,635	1,091,379	14	11	396,304	35	126	30

Note: Based on the 1988 *Census of Establishments*. "Large" firms are those with ten or more workers; "small" firms have fewer than ten workers. Labor productivity is expressed in gross value added.

Source: NSO (1990).

velopment of the export subsector of the garment industry has accelerated since 1987. There was a clear increase in both the number of garment exporters registered with the GTEB and the total employment in the garment sector as a whole between 1986 and 1987. Paralleling the increase in exporters, the number of garment subcontractors for exports, also registered with the GTEB, increased rapidly from the late 1980s to the early 1990s (table 5-5).

Exporters/contractors are located either in large cities or in export-processing zones (EPZs), where privileges are given to firms. This is clearly demonstrated by the regional distribution of subcontractors for export garments shown in table 5-5. As shown below,

Figure 5-1. Garment Industry in the Philippines: Subsectors

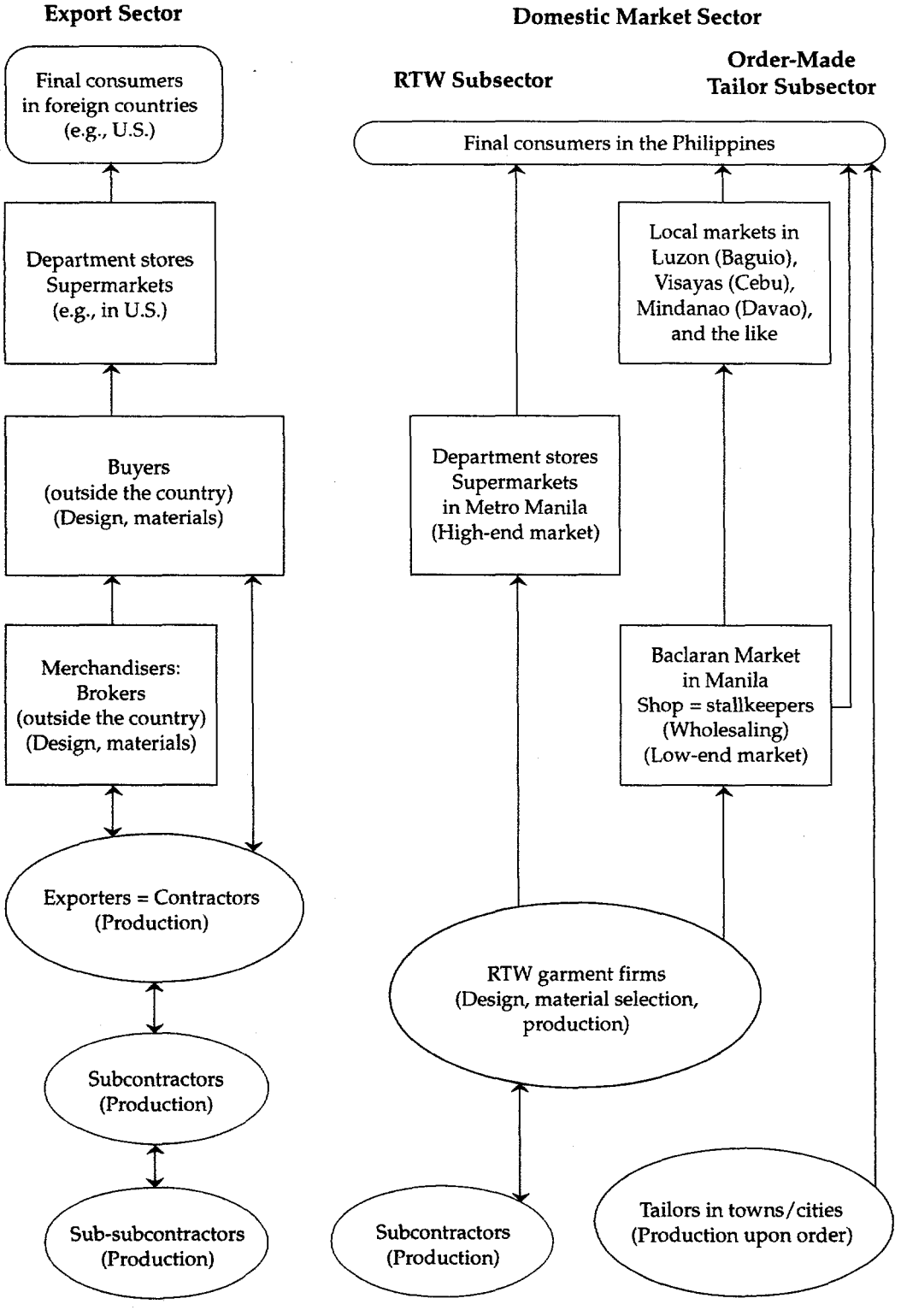


Table 5-4. Number of Garment Exporters, Total Garment Exports (FOB), and Employment Index of the Garment Sector

Year	*Number of garment exporters*	*Value of garment exports (US$ million)*			*Employment in the garment sector (Index: 1985 = 100)*
		To quota countries	*To nonquota countries*	*Total*	
1984	706	568	79	647	109
1985	747	577	82	659	100
1986	754	672	131	803	105
1987	919	993	155	1,148	127
1988	1,061	1,092	183	1,275	126
1989	1,086	1,352	238	1,590	148
1990	1,207	1,574	247	1,821	147
1991	1,069	1,588	320	1,907	147
1992	1,295	1,762	430	2,192	163
1993	1,428	1,869	473	2,343	163

Note: The employment index is for the garment sector as a whole.
Source: Garment and Textile Export Board and Department of Trade and Industry.

the primary reason exporters put out garment production to subcontractors is to cut labor costs. Subcontractors should therefore be located in regions where wage rates are lower and government labor regulations weaker. At the same time, the transaction costs involved in managing subcontractors, particularly for tight quality control of their products, make it more convenient—even necessary—to use subcontractors located as close as possible to

Table 5-5. Garment Subcontractors in the Philippines

Year	*Total number of garment subcontractors*	*Distribution of garment subcontractors by region, 1993*						
		Region	*Number of garment subcontractors*	*Total number of workers*				*Number of machines*
				Direct	*Indirect*	*Administrative*	*Total*	
1988	1,669	Ilocos Region	0	0	0	0	0	0
1989	2,780	Cagayan Valley	1	8	2	5	15	8
1990	2,923	Central Luzon	470	10,568	2,524	1,146	14,238	12,119
1991	3,125	Metropolitan Manila	1,172	49,906	17,367	7,023	74,296	57,612
1992	2,613	Southern Luzon	715	22,250	6,245	2,752	31,547	24,517
1993	2,396	Bicol Region	1	36	0	6	42	31
		Western Visayas	2	469	20	8	497	50
		Central Visayas	35	818	175	62	1,055	764
		Eastern Visayas	0	0	0	0	0	0
		Mindanao	0	0	0	0	0	0
		Total	2,396	84,355	26,333	11,002	121,690	95,101

Source: Division of Bonded Manufacturing Warehouse, Garment and Textile Export Board.

the parent company. As a result, many subcontractors are located within Metro Manila, where most garment exporters gather, and in Southern and Central Luzon, adjacent to Metro Manila. Aside from Metro Manila and its surroundings, another small cluster of subcontractors is found in Central Visayas; Metro Cebu is the central city with an EPZ nearby.

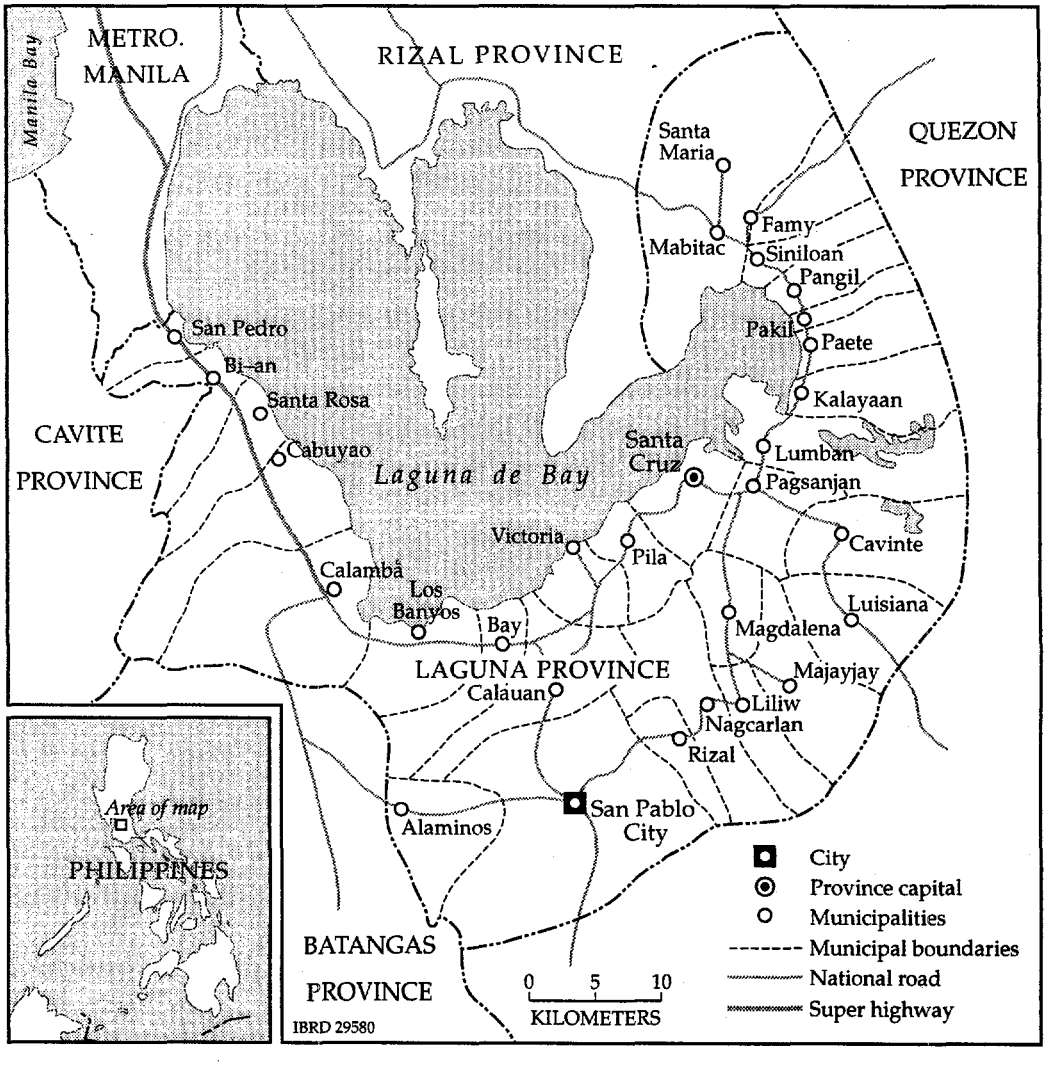
The RTW sector produces ready-to-wear clothes for domestic markets. Unlike exporters/contractors, who generally produce garments according to designs made, and using materials given, by the merchandisers/buyers, either in-house or through subcontracting, RTW firms usually cover the entire production process for garments. They handle everything from the selection and purchase of materials to cutting and sewing, and often to marketing. Most RTW firms have a similar number of workers and machines to the garment subcontractors for exports. It is not rare for them to depend on subcontractors, but RTW subcontractors (typically housewives) are more often not organized. They do contract jobs in individual houses rather than in organized factories or workshops.

Two subsectors can be discerned within the RTW sector: products for low-end markets and those for high-end markets. In the former, garments are typically sold by RTW firms to wholesalers at Baclaran Market in Manila; they are then sold to retailers and wholesalers in such remote regions as Visayas and Mindanao. RTW firm owners sometimes keep stalls in Baclaran, engaging in marketing on their own and using the stalls as sources of market information and knowledge about consumers' preferences. In the high-end RTW subsector, garments are made specifically for select supermarkets and department stores in Metro Manila that have customers from rich families and the burgeoning middle class. Good design and neat clothes are more critical for this high-end market than for the low-end market.[6] RTW firms and subcontractors for export are interrelated—many of the firms have converted themselves into subcontractors as the demand for subcontractors has increased. There are also some RTW-converted subcontractors who have switched back to the RTW sector. The technology and skills adopted by RTW firms and subcontractors for export are essentially the same. Garment entrepreneurs, and their associated labor and capital, are therefore largely interchangeable at this level between the two sectors. The flows of materials and finished garments, however, are entirely separate and do not cross between these sectors.[7] The third garment subsector may be called the order-made tailor sector. In any town or city in the Philippines, there are many tailor shops that produce clothes upon order from customers. They produce a surprisingly wide range of clothes, from casual, everyday clothes to formal suits and dresses. Like RTW firms, these independent tailors do everything in garment production. However, they differ from RTW firms on one important point: because they sell their own skills to their customers, they rarely depend on subcontractors. This would also explain why few large tailors hire a number of sewers. Many of the small garment firms shown in table 5-3 are these tailors. There are cases, although infrequent, in which subcontractors for export or RTW firms accept jobs for order-made clothes from their neighbors, but they consider order-made jobs as their side business and clearly distinguish them from their main business.

Garment Subcontractors for Exports in Laguna Province

Laguna Province includes the southern coast of Laguna de Bay, the Philippines' largest lake (figure 5-2). A strip of lowland along the lake rises to upland areas that continue to the surrounding mountainous provinces of Cavite, Batangas, and Quezon. Until recently, the whole of Laguna had been agricultural; rice, coconut, and sugarcane were the major products. The lowland strip forms one of the most productive rice-growing areas of the country. Developed since the early Spanish period (sixteenth to seventeenth centuries), it was a major supplier of rice to Manila, using boat transport across the lake. Sugarcane has been planted in some upland areas between the lowland strip and the foothills or more mountainous parts of the province, particularly in Calamba and surrounding municipalities. Partly because this section of the province has been rapidly urbanized in the last few de-

Figure 5-2. Laguna Province, Philippines



cades, and partly because the price of sugar has been unfavorable, sugarcane has been slipping from its status as a "major" agricultural product of the province. Hilly terrain, which is covered nearly 100 percent by coconut trees, constitutes about three-fourths of the province.

Among these agricultural areas are local towns (*municipio*), where the municipal office, town church, market, and small stores are located. These towns are small in population, with the exception of several municipalities in the northwest corner of the province. Apart from their functions as administrative units and minor collection and distribution points for locally produced agricultural commodities, these towns do not perform the functions of regional centers. Their quiet but dormant atmosphere shows only rare signs of rural industry, with the exception of a few rice mills, sugar centrals, and small shops for car repair and vulcanizing.[8] The rural villages in Laguna are predominantly agricultural, except for some coconut-related industries mentioned below. The rice and coconut areas in the province, although intermingled at their margins, form not only different agricultural zones, but also involve farmers of different natures. Rice is basically a subsistence crop, and rice farming in this region is practiced as monoculture. As in other parts of the Philippines, absentee landlordism is pervasive in the area. Most rice farmers cultivate tiny plots of paddy fields as tenants of some sort,[9] and rice villages are largely inhabited by tenant farmers and landless laborers, who are even more numerous than the farmers. In contrast, coconut is a multipurpose commercial crop. In addition to the main product of coconut oil (copra), it produces desiccated coconut, juice, wine, nata-de-coco, lumber, charcoal, brooms and mats (from leaves), and many other goods. Furthermore, many other commercial tree crops, such as bananas, papayas, lanzones, and coffee, are intercropped under coconut trees. Unlike rice farmers, coconut farmers in this area are mostly small to medium-size owner-operators (5 to 20 hectares), and they reside in coconut villages together with coconut tenants and coconut laborers. These differences between rice and coconut lead to a difference in the degree of agriculture-based rural industry. Few rice-based rural industries are found in the rice-growing areas (with the exception of rice milling), but numerous industries, including copra making, wine (lambanog) distillery, food processing, and handicrafts, have been developed in the coconut-growing areas.

For convenience in this analysis of garment subcontractors in Laguna, the province is divided into four sections (see figure 5-2 and table 5-6). Laguna I, covering the municipalities from San Pedro to Calamba, is the corridor mentioned earlier. Rice and sugarcane were once grown in this area, but urban subdivisions and industrial factories have spread during the past two decades. Because of the superhighway running up to Calamba, it is a one-hour drive from the center of Manila to the end of this section, if traffic is not heavy. Laguna II consists of municipalities that are less than two hours' travel from Manila. Laguna III and IV are also plotted according to travel time from Manila, less than three hours in the case of Laguna III and more for Laguna IV.

Unlike Laguna I, which is now virtually a part of Metro Manila, Laguna II to IV are still predominantly agricultural. The municipalities along the coast of Laguna de Bay from Calamba to Sta Cruz (part of Laguna II) form a major rice-growing area, and farmers there

Table 5-6. Number of Garment Subcontractors and Their Workers in Laguna, 1993–94

Area	*Number of contractors*	*Total number of workers*	*Number of workers per subcontractor*	*Density (per 1,000 population)*	
				Number of subcontractors	*Number of workers*
Laguna, total	189	6,528	35	14	476
San Pedro	36	1,587	44	23	1,014
Binan	12	320	27	9	238
Sta Rosa	32	814	25	34	859
Cabuyao	10	298	30	15	445
Calamba	37	2,402	65	21	1,385
Laguna I	127	5,421	43	20	865
Alaminos	10	258	26	36	941
San Pablo	18	281	16	11	174
Los Banos	5	82	16	8	124
Bay	2	26	13	6	80
Calauan	3	43	14	9	131
Pila	1	11	11	4	40
Sta Cruz	7	149	21	9	195
Laguna II	46	850	18	11	200
Nagcarlan	3	66	22	8	175
Liliw	5	75	15	23	342
Laguna III	8	141	18	13	237
Magdalena	2	37	19	15	275
Luisiana	1	16	16	7	112
Pagsanjan	1	10	10	4	40
Lumban	1	18	18	5	91
Kalayaan	1	14	14	8	107
Pakil	1	9	9	7	67
Sta Maria	1	12	12	5	58
Laguna IV	8	116	15	7	97

Note: One subcontractor for weaving with 1,050 workers is excluded from the list.
Source: Garment and Textile Export Board.

are typically tenants of rice monoculture. Coconut is grown mainly in the hilly parts of the province, stretching from Alaminos/San Pablo (another part of Laguna II), through Nagcalran/Liliw (Laguna III), to Magdalena/Luisiana (part of Laguna IV). The north-eastern corner of the province (the rest of Laguna IV) is not only far from the center, but it also has relatively meager land resources because of the topography: a steep mountain range closely parallels the shore of the lake, leaving little room for either paddy fields or coconut land. To recapitulate, the degree of urban influence decreases rapidly as one goes further from Laguna I to Laguna IV, and it is almost entirely absent in the last two sections.

Garment Subcontractors

Table 5-6 lists 189 export subcontractors who were registered with, and accredited by, the GTEB in 1993–94, according to their locations. In a clear trend, the intensity as well as the number of subcontractors decreases as we go farther from Metro Manila, where most of the garment exporters (contractors) are concentrated. Such a trend seems to indicate that the cost of managing subcontractors increases for the principal contractors as the distance between them increases. The low density of subcontractors at a location in Laguna would make the cost of using subcontractors directly proportional to the distance. In areas where many subcontractors are concentrated in one neighborhood, as in some traditional garment-producing towns in Batangas, the cost per subcontractor could be low, even if the traveling distance from the parent contractor were greater.[10] It should be noted, however (table 5-6), that although the density of garment subcontractors decreases according to the distance from Metro Manila, some irregularities in this trend are found in selected towns, such as Alaminos, Liliw, and Magdalena. These towns, with higher densities of subcontractors, are all located in the coconut area, and the density is clearly low in the Laguna II towns (from Los Baños to Pila) situated in the best rice-growing area of the province.

Most of the subcontractors in Laguna are small, employing thirty-five workers on the average. Eighty percent employ fewer than thirty, and more than half employ ten to twenty workers (table 5-7). However, not all are small: some are very large, and the largest employ more than 500. There is a clear tendency for firms to become smaller as the distance from Metro Manila increases (table 5-6); all the large subcontractors with more than 100 workers are in Laguna I.[11] The services these subcontractors render are numerous, ranging from cutting cloth through embroidery/smocking/appliqué and sewing (table 5-8). There are also some special services, including beading and injection molding (for hangers). Knitting services are for such products as sweaters and gloves. It is customary for each

Table 5-7. Size Distribution of Garment Subcontractors in Laguna, 1993–94

Size of firm in number of workers	*Number of firms*	
Fewer than 10	29	(15)
10–20	97	(51)
20–30	26	(14)
30–40	11	(6)
40–50	7	(4)
50–100	10	(5)
100–200	5	(3)
200–500	2	(1)
500–1,000	2	(1)
Total	189	(100)

Note: Figures in parentheses are percentages.
Source: Garment and Textile Export Board.

Table 5-8. Number of Garment Subcontractors and Number of Workers per Subcontractor by Service and Major Products, Laguna Province, 1993–94

	Region of Laguna									
	Number of subcontractors					*Number of workers per subcontractor*				
Task	*I*	*II*	*III*	*IV*	*Total*	*I*	*II*	*III*	*IV*	*Total*
Service										
Sewing	94	42	7	6	149	47	18	17	14	36
Embroidery	14	1	0	2	17	32	15	0	17	29
Knitting	9	0	1	0	10	44	0	22	0	42
Beading	4	1	0	0	5	17	36	0	0	21
Smocking	1	0	0	0	1	26	0	0	0	26
Appliqué	1	1	0	0	2	10	24	0	0	17
Injection molding	1	1	0	0	2	18	23	0	0	21
Cutting	1	0	0	0	1	19	0	0	0	19
Other	2	0	0	0	2	15	0	0	0	15
Total	127	46	8	8	189	43	18	18	15	35
Product										
Baby/children's wear	40	32	4	4	80	27	18	20	13	22
Coat/jacket	20	4	2	1	27	81	15	13	21	64
Sweater	6	0	0	0	6	44	0	0	0	44
Polo/blouse	4	2	0	0	6	33	19	0	0	28
Athletic suit	12	0	0	0	12	71	0	0	0	71
Shorts	7	1	0	0	8	17	19	0	0	17
Gloves	1	1	1	0	3	26	18	22	0	22
Accessories	7	1	0	1	9	14	36	0	16	16
Trousers	6	3	1	0	10	31	24	15	0	27
Underwear	2	0	0	0	2	11	0	0	0	11
Dress	6	0	0	0	6	15	0	0	0	15
Pajamas	4	1	0	0	5	13	27	0	0	15
Other	12	1	0	2	15	75	23	0	14	63
Total	127	46	8	8	189	43	18	18	15	35

Note: For the regions in Laguna, see Table 5-6.
Source: Garment and Textile Export Board.

subcontractor to specialize in a selected service. Some perform more than one service, such as sewing and embroidery, but they are the exception. The overwhelming majority of Laguna subcontractors are specialized in sewing, the service in greatest demand in garment production, which at the same time requires less skill than other specialties, and few machines except sewing machines.

The list of garment products that the subcontractors make is also long. Here, too, there is specialization among subcontractors: some produce mainly baby and children's wear, while

others create coats and jackets. Specialization in products, however, is much looser than in services. Many subcontractors that specialize in baby and children's wear, for example, accept sewing jobs for coats and jackets, ladies' dresses, shorts, and other items. The most popular product among Laguna subcontractors is baby and children's wear, followed by coats and jackets and trousers and shorts.

The specialized services supplied by subcontractors suggest that garment exporters depend heavily on subcontractors for selected steps in garment production. As will be revealed by the sample survey in the next section, some exporters put almost all production processes out to subcontractors;[12] they merely perform the final checking and revising of finished garments and their packing and shipping.

Profile of Firms and Entrepreneurs

Sample Survey

In order to obtain detailed information on the nature and characteristics of garment firms in Laguna, a sample survey was conducted of the owners or managers of garment firms in August of 1994. The main target of the survey was subcontractors in the export garment sector of Laguna II–IV. In addition, a small number of exporters and RTW garment firms were interviewed to obtain general information about the garment sector as a whole.

The subcontractor sample was first drawn randomly, based on a list of subcontractors registered in 1990–91 that had been prepared by the provincial office of the Department of Trade and Industry. Soon after commencing the survey, however, it was found that the turnover or closure rate of subcontractors was extremely high; in many municipalities, about 50 percent of the subcontractors listed were out of operation by the time of the survey. Many unregistered sub-subcontractors and subcontractors were also found. Therefore, many unlisted firms were added to the sample "randomly" whenever they were found. The sample exporters were selected partly from among those in contractual relationships with the sample subcontractors, and partly from the subcontractor list—that is, exporters that had once been subcontractors.

Altogether, individuals at forty-eight firms were interviewed; forty were subcontractors and the rest were divided equally between exporters and RTW firms (table 5-9). All the subcontractor samples but one were from Laguna II–IV.[13] It should be noted that three subcontractors that have since closed their garment firms are included in the subcontractor sample. Two of the exporters in the sample are located in Metro Manila, and two of the RTW examples are in Taytay, Rizal, a town that has long been famous for producing RTW garments.[14]

Sample Garment Firms

Many sample subcontractors are recent establishments, with an average of fewer than eight years of operation (table 5-9). Some began their operations before 1970, which suggests that the garment subcontracting business for export is not entirely new. The starting

Table 5-9. Sample Garment Firms in Laguna: Number by Type, Location, Year Opened, Service, and Product

	Number of firms			
	Subcontractor for export	*Exporter*	*Firms for domestic market*	*Total*
Total	40	4	4	48
Location				
Laguna I	1	1	—	2
Laguna II	27	1	2	30
Laguna III	5	—	—	5
Laguna V	7	—	—	7
Metro Manila	—	2	—	2
Rizal (Taytay)	—	—	2	2
Year opened				
Before 1970	1	1	—	2
1970s	2	1	3	6
1980–84	5	—	1	6
1985–86	4	—	—	4
1987–88	7	—	—	7
1989–90	6	2	—	8
1991–92	10	—	—	10
1993–94	5	—	—	5
Average years of operation	7.3	20.8	20.3	9.4
Type of service				
Sewing	38	—	—	38
Sewing and embroidery	1	—	1	2
Knitting	1	—	—	1
General	—	4	3	7
Major product				
Baby dress (BD)	26	1		27
Jacket (J)	4	1	—	5
BD + J	2	1	—	3
Trousers	4	1	—	5
Shorts	2	—	—	2
Girl/lady dress	—	—	3	3
Gloves	1	—	—	1
Brassier	1	—	—	1
Blouse and T-shirt	—	—	1	1

Source: Author's data.

years for the subcontractors, however, clearly indicate that the garment export sector has grown dramatically since the late 1980s. This trend is consistent with the inclusion of two new exporters in the sample (both started their operations in the late 1980s), and one is quite old, established in the late 1940s.

The major service rendered by the sample subcontractors is sewing, as is the case for the subcontractor population in Laguna (table 5-9). As mentioned earlier, of the various services, sewing requires the least skill and capital. For instance, cutting requires more skill than simple sewing, and buttonholing requires both skill and special machines that are more expensive than sewing machines. Without exception, sewing subcontractors perform only the sewing parts of garment production. A subcontractor receives a job order from a contractor (exporter) together with the designed pattern (sample clothes), cut materials, and thread, and sews the ordered garment, usually finishing work before the final stage. The contractor completes the nearly finished garments, completing such difficult tasks as buttonholing and fixing the crotch/zipper.[15] This incompleteness of the production process—or the separation of garment production into many different processes—in the export sector is in sharp contrast to the RTW sector. RTW firms, more or less equivalent in size of operation to export subcontractors, but with much smaller lot sizes for each garment, do everything from designing to selection and purchase of materials, sewing the final product, packing, and marketing.

Subcontractors accept jobs outside their specialized products. What they will accept depends on the pace of demand (job orders) for their service and the price of contracts. Baby clothes, jackets, and shorts require only a sewing machine, which enables any sewing subcontractor to accept orders for these products, although their sewers sometimes seek higher productivity by trying to specialize in a given product. Subcontractors of products that require special machines, such as brassieres and gloves, are generally specialized by product.

Two kinds of subcontractors are distinguished by their degree of dependency on contractors/exporters. Freelancers contract with more than one contractor, not only over time but also at the same time. "Parent-child" subcontractors work exclusively for one contractor who provides not only all job orders, but also the necessary machines, a quality controller, a machine mechanic, and even a supervisor; the subcontractor provides only sewers and a workshop. In an extreme form of freelance, subcontractors select contractors according to their own criteria. Although actual subcontractors lie between these two poles, freelancers usually produce multiple products, and subcontractors that specialize in a specific product are generally of the "parent-child" kind.[16]

Most of the sample subcontractors employ ten to twenty workers (table 5-10). Just over 10 percent are "large," with more than thirty workers. The optimum size for subcontractors in order to minimize transaction costs appears to be about ten to thirty workers; it is more difficult to get good job orders with fewer than ten workers,[17] and the cost of labor management in single owner-manager–operated firms increases disproportionately when the number of workers exceeds thirty.

The most serious problems subcontractors face are a lack of working capital and late payments by contractors, as well as difficulties in managing sewers. The labor-management problem is the most serious source of headaches for RTW firms (their size is comparable to that of export subcontractors). Two of the subcontractors who had gone out of the garment business mentioned this problem first as their reason for shutting down. Many

Table 5-10. Size Distribution and Sewers' Wage, Sample Garment Firms

	Number of firms			
	Subcontractor for export	*Exporter*	*Firms for domestic market*	*Total*
Total	40	4	4	48
Size (number of workers)				
Below 10	9	—	1	10
10–19	19	—	—	19
20–29	7	—	2	9
30–49	3	—	1	4
50–99	2	—	—	2
100 and more	—	4	—	4
Average number of workers	17.0	272.3	24.0	38.9
Size (number of machines)				
Below 10	6	—	—	6
10–19	20	—	1	21
20–29	8	—	2	10
30–49	4	2	1	7
50–99	2	—	—	2
100 and more	—	2	—	2
Average number of machines	20.7	121.5	24.5	29.4
Average weekly sewers' wage	P395	P823	P988	P499

Source: Author's data.

subcontractors within the "optimum" size group also expressed a desire to maintain their present size in the future. There are a few exceptions—subcontractors far beyond the optimum size that still want to expand. All of them have aspirations to climb the ladder toward principal contractor/exporter.

The size distribution of sample garment firms in the number of machines in place has a pattern similar to that of their distribution by number of workers (table 5-10). For subcontractors and RTW firms, the number of workers is determined by the number of sewing machines, particularly high-speed sewing machines. On average, a subcontractor has twenty machines: fifteen high-speed sewing machines, two ordinary sewing machines with motors,[18] two over-edging machines, and one other special machine (table 5-11). This machine list corresponds to an average employment of seventeen workers: fourteen sewers, two revisers, and one supervisor (table 5-11). It should be noted that the subcontractors with ordinary sewing machines are generally found in remote parts of Laguna; it is almost impossible to recruit sewers without high-speed machines. Exceptions to this sewer-machine matching rule are found among exporters (table 5-10). All four sample exporters hire more than 100 employees, but two of them have fewer than fifty machines. This anomaly

Table 5-11. Average Number of Machines and Workers for Thirty-nine Sample Subcontractors for Sewing

Category	*Average number of machines*	*Average number of workers per subcontractor*
Machines		
Total	20.8	
Sewing		
High-speed single	14.9	
High-speed double	0.2	
Ordinary	2.3	
Edging machine		
5-thread	1.2	
3-thread	1.0	
Other special machines	1.2	
Workers		
Total		16.8
Sewer		14.2
Reviser/trimmer		1.6
Supervisor		1.0

Source: Author's data.

is explained by the practice of some exporters of putting-out all production operations to subcontractors except final checking, packing, and shipping.

A major reason for exporters to subcontract is to exploit cheap labor, because small subcontractors in rural areas are not subject to the minimum wage and other tight labor regulations. Although there would be a tradeoff between the transaction costs associated with utilizing subcontractors and labor cost differences, the disparity in the effective wage rates between subcontractors and exporters seems to be large enough to make subcontracting attractive to exporters (table 5-10). The minimum wage rate of the region is currently P145 daily; among the exporters, the average sewers' wages are P823 weekly, roughly equal to this daily rate multiplied by six working days. In contrast, the average sewer's wage among the sample subcontractors, all of whom are paid piece-rate wages, is as low as P395 a week. Considering that subcontractors' employees usually work about ten to fifteen hours each day, the wage gap between exporters and subcontractors could be even larger.[19]

Entrepreneurs

What kind of people own and manage the sample garment firms? In all the sample subcontractors and RTW firms that are unincorporated family businesses, the owners themselves manage their firms, although in some cases spouses participate in the management and assist in firm operations. In the case of the sample exporters, all of which are incorpo-

rated, the two smaller examples are managed by the owners, but the two large ones are operated by hired managers.

The owner/managers are relatively young, mostly in their thirties and forties, and predominantly female (though there are male owner/managers). An overwhelming majority are college graduates (table 5-12). Nearly 60 percent have backgrounds, judged by their parents' occupations, on farms or other rural origins. This percentage increases to 70 percent among subcontractors. They can be legitimately called *rural* entrepreneurs.[20] Among those with rural origins, more are from coconut areas than from the rice areas. This is consistent with the findings in the previous section about the subcontractor population in Laguna, and it may indicate that the commercial nature of coconut farming fosters entrepreneurship better than subsistence-oriented rice farming. Of those from the rice areas, the majority are from the owner-farmer class, but a few owner/managers are from poor tenant families. Many accumulated their capital for their initial investment in their garment firms from the rice trade (buying and selling). Coconut laborers are usually as poor as, or even poorer than, rice tenants, but some have become subcontractors, investing their savings from the coconut trade. All this suggests that rural commerce activities are important, not only for agriculture itself, but also in fostering entrepreneurship amenable to industrialization.

Of the thirty-nine sample subcontractors for sewing, eleven have been, or still are, employees of exporters in Metro Manila. Including two subcontractors whose families had been engaged in tailoring and three subcontractors who started their garment businesses as RTW firms, sixteen subcontractors had some experience in the garment sector. They may have some advantage either in sewing skill and knowledge or in getting contacts with exporters. It should be noted, however, that neither experience in the garment sector nor sewing skill and knowledge is essential to start as a subcontractor. The rest of the subcontractors had little knowledge or experience of the industry before they started.[21] The entry barrier to becoming an export subcontractor is extremely low. Aside from the funds needed for initial investment in sewing machines and a workshop, one needs connections with exporters. In this respect, the employees and former employees of exporters have a clear advantage.

Six subcontractors started as subcontractors. Their first contracts were with subcontractors operating nearby, and they became subcontractors as soon as they could establish direct contact with exporters. Many subcontractors with no prior knowledge or experience in garment work studied the garment business by visiting existing, reputable subcontractors before they started their own businesses. Although difficult to quantify, there seems to be a clear correlation between the intensity of this effort and the performance of the subcontractors.

The majority of sewing subcontractors obtained funds for initial investments from their own savings (table 5-13). The second important source of funds was the provision of credit, mainly by parent exporters, and generally in the form of machines. Only a limited number of subcontractors obtained bank loans for their investments. It is difficult for many of them to borrow from banks, not only for initial investments, but also for investments after

Table 5-12. Profile of Owner/Managers of the Sample Garment Firms

	Number of firms			
	Subcontractor for export	*Exporter*	*Firms for domestic market*	*Total*
Total	40	4	4	48
Age of owner/manager				
20s	2	—	—	2
30s	13	2	—	15
40s	18	—	4	22
50s	3	—	—	3
60s and above	4	—	—	4
Unknown	—	2	—	2
Sex of owner/manager				
Male	11	2	—	13
Female	29	2	4	35
Educational level of owner/manager				
Primary	1	—	—	1
Some high school	2	—	—	2
High school graduate	6	—	2	8
Vocational	1	—	—	1
Some college	5	—	—	5
College graduate	25	2	2	29
Unknown	—	2	—	2
Social class of owner/manager (parents' occupation)				
Farm				
Rice-owner	5	—	—	5
Rice- and sugar-owner	1	—	—	1
Rice-tenant	3	—	—	3
Rice- and coconut-owner	5	—	—	5
Coconut-owner	10	—	—	10
Coconut/copra trade	2	—	—	2
Coconut-laborer	2	—	—	2
Farm total	28	—	—	28
Nonfarm				
Lawyer	—	1	—	1
Government employee	2	—	—	2
Teacher	2	—	—	2
Laborer/handicraft	2	—	1	3
Tailor	2	—	—	2
Merchant/storeowner	3	—	—	3
Garment firm owner	—	—	2	2
Footwear firm owner	1	—	—	1
Construction contractor	—	1	—	1
Unknown	—	2	1	3
Nonfarm total	12	4	4	20

Table 5-13. Sources of Initial Investment for the Sample Sewing Subcontractors

Source	*Number of subcontractors*	
Parent company + own savings	7	(18)
Parent company + bank loan + own savings	1	(3)
Parent company + loan from relatives + own savings	1	(3)
Loan from relatives/friends + own savings	6	(15)
Bank loan + own savings	1	(3)
Middlewoman + own savings	1	(3)
Own savings	19	(49)
Donation	2	(5)
Unknown	1	(3)
Total	39	(100)
Number of subcontractors who have ever received bank loans	8	(21)

Note: Figures in parentheses are percentages.
Source: Author's data.

the business has been established, in spite of the program of government-subsidized loans intended to foster rural industries. Because of the relatively low capital requirement for subcontractors, which is one of the conditions that makes the garment industry easy to enter, the unavailability of bank loans does not seem to be a serious entry barrier.[22] Many of the subcontractors have sideline businesses and occupations (table 5-14), which often allow them to secure working capital for running their garment businesses. The owners or spouses of thirty-four of the thirty-nine subcontractors held, or still hold, salaried jobs.[23] In addition to working for exporters, popular positions include working as government employees and as teachers. Some have accepted important positions in their towns, such as mayor or vice mayor. Many, including government employees and teachers, express the opinion that they set up their garment workshops not only for private profit but also for the employment benefits to their localities.[24] Another source of funds is overseas remittances. In spite of the widely held belief that remittances from these workers are wasted—mainly to increase consumption—our study revealed that they are an important source of investment for the development of rural industry.

What about the possibility of subcontractors expanding their businesses to the level of contractors/exporters? Table 5-15 lists the contractors/exporters with whom the sample subcontractors are affiliated. Many are joint ventures owned by Americans; Chinese *mestizo*, most probably from the "traditional," urban-based Chinese merchant class, are also represented among owners of export garment houses, as well as exporters who are ethnic Filipinos. Of the twenty-three parent garment companies, 35 percent are owned by Filipinos, although most of them are relatively small, with fewer than 500 employees.

The family backgrounds of these Filipino owners are unknown, except for two exporters who had previously been garment subcontractors. One of the firms was started in the 1970s by the mother of the present owner as a tiny RTW garment shop in a town in

Table 5-14. Major Sideline Jobs/Sources of Funds: Thirty-nine Sample Sewing Subcontractors

	Number of subcontractors
Farm-related	11
Coconut farming/trade	5
Rice farming/trade	4
Livestock farming (duck, pig)	2
Nonfarm, self-employed business	6
Rice mill	1
Footwear factory	1
Garment trade	1
Construction	1
Jeepny owner	1
Farm machinery store	1
Nonfarm, salaried job	34
Teacher/ex-teacher	4
Government employee	8
Garment exporter	9
Other large company	4
Overseas employment	6
Mayor/ex-mayor	2
Vice mayor	1

Note: Major sideline jobs/sources of funds refer to those of owners/spouses, allowing double counting. Employees in government, garment exporters, and employees of other companies/institutions, as well as workers for overseas employment, include those who no longer hold these positions.

Source: Author's data.

Laguna, which began operation with three ordinary sewing machines. The mother later converted the shop into an export subcontractor, and finally, in the late 1980s, the current owner made the transition to becoming an exporter by securing export quotas and foreign buyers. Another subcontractor who also became an exporter is of urban origin. After working as an employee of a company for more than ten years, he engaged in the food trading business, then used his savings to set up a garment workshop for export subcontracting. Very few can climb the ladder, but at least the upward route is open.[25] One exporter who had previously been a subcontractor listed the necessary conditions for becoming an exporter:

- Funds for investment
- Good connections with trading companies and key persons in the garment export business
- The ability to speak English—important in establishing those connections
- A good sense of management, especially cost accounting.

Many sample subcontractors who aspire to climb the ladder are well aware of these conditions, particularly the first and second.

Table 5-15. Garment Exporters Affiliated with Sample Subcontractors

	Owner of firm				
Size of firm	*American*	*Indian*	*Chinese Filipino*	*Filipino*	*Total*
Large	7	0	3	1	11
	(64)	(0)	(27)	(9)	(100)
Small	1	2	2	7	12
	(8)	(17)	(17)	(58)	(100)
Total	8	2	5	8	23
	(38)	(9)	(22)	(35)	(100)

Note: About ten exporters are not included here, because of nonavailability of information. Figures in parentheses are percentages.

Source: Author's data.

Garment Production by Subcontractors

The Process and Structure of Garment Production by Subcontractors

The operations of export subcontractors for sewing are rather simple: they receive sample clothes and cut materials, or fabric, from an exporter; sew the clothes following the sample pattern by dividing the sewing process into simple operations; and deliver the finished garments to the exporter within a specified period. A subcontractor usually provides a workshop and sewing machines and hires sewers. Rough estimates of revenue, costs, and returns of garment operations are listed in table 5-16. Following this table, the production process of garment subcontractors in Laguna can be observed.

A contract between a subcontractor and an exporter consists of three essential clauses: the contract price for each piece of the product, the number of pieces contracted, and the date for delivery of the finished clothes to the exporter. The annual revenue of a subcontractor depends on the first two clauses, as well as the number of orders from the exporter(s). The contract price of a garment contracted by subcontractors varies widely—from as little as P3 a piece to P80 a piece—depending on the quality and sophistication of the job. The number of pieces in each order ranges from several hundred to several hundred-thousand. The contract period also varies, from two weeks to a few months. Contract prices are high for urgent jobs.

It is critical for subcontractors to secure a continuous flow of contract jobs from exporters throughout the year. They make every effort to this end, but most subcontractors, particularly freelancers, are subject to fluctuations and lulls between job orders. One source of instability, as in agricultural production, is the seasonality in the garment industry. The demand for garments is stronger during July to December (before Christmas), and it declines markedly for the February-May period.[26] The fixed capital assets needed for subcontractors are machines and a workshop. There are various ways for subcontractors to acquire sewing machines, the most important means of production for them, and other

machinery. Some buy new machines from machine shops, but a more popular method is to purchase machines in the secondhand markets, often with arrangements to pay on an installment plan. The machines of subcontractors who close their shops and machines used as collateral by subcontractors who fail to make repayments are also occasionally available. There is a machine rental market, but it is narrow. Machines are sometimes provided, usually rent-free, by an exporter if a subcontractor wants them. Many subcontractors prefer to own the machines themselves, because they do not want to be restricted by a given exporter.

All the sample subcontractors have at least one workshop; two of them have two. The size and quality of these workshops vary enormously. Some use a part of their houses as their workshop, with or without renovation, and others convert warehouses for farm equipment to this purpose. Some have built or leased an independent house. With few exceptions, their workshops are humble and small, as judged from the estimated rental value listed in table 5-16. It is commonly observed that too many sewers are working with machines in too confined a space.

For machines, capital services are estimated by applying an annual interest rate of 20 percent to the stock values. This interest rate is selected for conversion because the sample

Table 5-16. Estimates of Revenue, Costs, and Returns of Average Garment Subcontractors for Exports, for One Year of Operation, 1994 Prices

Item	*Pesos (1,000)*	*Percent*
Revenue	630	100
Capital services		
Machines	66	10
Workshop (central value)	30	5
Total	96	15
Labor		
Sewers	325	52
Revisers/trimmers	26	4
Supervisors	23	4
Total	374	59
Current inputs		
Needles	2	0
Thread	23	4
Electricity	21	3
Machine maintenance	6	1
Total	52	8
Operator's surplus	108	17

Note: For the average subcontractor with 16.8 workers and 20.8 machines (table 5-11). The following assumptions are taken from the sample averages: contract price per contracted garment = P17.24; sewers' share = 51.6 percent; labor productivity = 208 pieces/sewer/month; net working months = 11 months; rejection rate = 5 percent. Capital service for a workshop is obtained from owner's self-evaluation; for machines, it is taken from the asset values by applying 20 percent/year interest rate.

Source: Author's data.

subcontractors unanimously point out that they would never borrow money from banks if the interest rate were greater than 20 percent. The actual interest rates for those who have received bank loans range from 12 percent (institutional loans) to 19 percent (commercial loans). The rental value of workshops is estimated by the sample subcontractors in capital service. The share of capital services thus estimated absorbs 15 percent of total revenue.

The owner/managers of subcontracting firms determine the piece rate their sewers will receive for each job order. The share of the sewer's wage in the total price varies greatly, not only across subcontractors but also for the different orders received by a single subcontractor, from 33 to 75 percent, depending on the difficulty of the job. A 50:50 sharing, however, is most popular, and the average sewer's share is 51.6 percent. Revisers/trimmers and supervisors, whose main function is in-house quality control, are usually paid a fixed daily rate. In some cases, they work as sewers when free from their own duties and receive piece-rate wages in addition to their fixed wages. In about half of the sample subcontractors, the owner works as reviser and supervisor. In these cases, not all of the labor earnings are paid out. For labor as a whole, the factor share in total revenue is estimated to be nearly 60 percent.

In addition to labor and capital, the subcontractors require current input, including needles, thread, electricity, and machine maintenance. Thread is provided by exporters for some high-quality job orders, but usually is not provided for ordinary work. Because sewing machines run on electricity, this item is the second-largest current input, followed by machine maintenance. The needles for the sewing machines are provided by the subcontractors, but this expense is negligible. The combined cost of these current inputs is estimated to be 8 percent of the total revenue of the average subcontractor. In other words, the gross value-added ratio of the garment subcontracting business can be as high as 92 percent.

As a result, an average P108,000 of surplus, or 17 percent of total revenue, is left to the operators. This means a return of P9,000 monthly for their management, excluding the returns to fixed capital. If compared with the monthly incomes of P2,000 to P4,000 of government employees and teachers, the customary jobs available to people with higher educations in rural areas, this level of return is quite high. It should be noted that this is an average figure; some subcontractors earn much more than this, and others much less.[27] We can also estimate a rough order of the rate of return to capital investment. The average annual rate of return, as measured by the ratio of the operator's surplus to the value of fixed assets, is estimated to be 23 percent. If payments for wages and current inputs for one month are added to the capital requirement as working capital, the rate of return becomes 21 percent, roughly comparable to the interest rate used to convert asset values into flows. This rate of return should be much lower than the prevailing level of interest rates in the informal money markets in rural areas, but it is high compared with the rate on deposits in commercial banks in rural areas, currently about 5 percent annually. The garment subcontracting business is lucrative enough to attract investment by rural entrepreneurs.

Sub-Subcontracting Arrangements

It is not uncommon for subcontractors to put out part of a contracted job to sub-subcontractors, and a number of sub-subcontracting arrangements are used. Some subcontractors have relationships with regular sub-subcontractors that are just like those between exporters and subcontractors. In these, subcontractors add the sewing capacity of their sub-subcontractors into their total capacity. They often provide sub-subcontracors with machines. The jobs given to the sub-subcontractors are frequently as complete as those the subcontractors receive from exporters, with contracted prices that are usually the same as the rates the subcontractors pay to their in-house sewers. In an extreme form of this arrangement, a subcontractor will become an intermediary between an exporter and sub-subcontractors; the subcontractor will have no in-house production, but depend entirely on the sub-subcontractors for garment production.[28] The second kind of sub-subcontracting arrangement is to put out specific operations, such as trimming, to sub-subcontractors at a piece rate. Sub-subcontractors for this kind of work are usually housewives, who do the jobs at home. The third kind of contract is formed among subcontractors at the same level. When subcontractors have difficulty finishing jobs within the promised period, they ask their fellow subcontractors for help. Sometimes the subcontractors with a plethora of jobs give part of them to those who have difficulty finding orders. In this case, the contracted price between the first and second subcontractors is lower than that between the exporter and the first subcontractor. All three sub-subcontracting practices are fairly common, although some exporters prohibit sub-subcontracting.

Subcontractors, particularly freelancers, interact with each other rather intensively. When sub-subcontracting is practiced, it is common for sewing machines to be rented among the firms. Subcontractors exchange information about exporters, sewers, and the like through the Laguna Garment Subcontractor Association (founded in 1992, but no longer in existence), on exporters' premises, and at other occasions, such as seminars held by exporters for garment subcontractors. Within such an environment, it is intriguing that some subcontractors have large and long-outstanding payments due from other subcontractors, with whom they have had sub-subcontracting arrangements. In addition to the problem of debt insolvency, there are cases of swindlers—usually from outside the locality—who disappear after collecting the finished products.[29]

Sewers and Labor Management

Sewers working in garment subcontracting firms are predominantly female, but about 10 percent of the total sewer population is male.[30] Most sewers are from the bottom strata of rural villages—agricultural laborers, small tenants, and fishermen's families—and generally have lower-level educations, such as primary school only, or perhaps some high school. Many sewers come from remote areas, and nearly 90 percent of subcontractors have dormitories for live-in sewers; the accommodations are very humble, with free room and board.

Sewers typically work from 7 o'clock in the morning to 5 o'clock in the evening; overtime work extends the day up to 10 o'clock at night, and they work at least six days each week. It is not unusual for them to work on Sundays to complete rush jobs. The average sewer receives a weekly wage of about P400 (table 5-10), which yields a daily wage of about P65, more than 50 percent lower than the minimum wage rate of this region.[31] This daily wage is comparable to, or a bit lower than, the daily wage rate for rice transplanting in Laguna, which is P70 to P80, although transplanting takes only four to five hours each day. Nevertheless, few sewers take leave during the transplanting season, but many do so during the rice-harvesting season, because harvesting work gives them an in-kind daily wage (paddy) worth more than P100. This seems to suggest the value sewers place on the job security found in the garment sector in relation to the higher-paying, but less certain, job opportunities in farming, as well as the clean work of sewers compared with the drudgery of working in muddy paddy fields.

The labor supply is abundant, and thus it is not difficult for subcontractors to hire as many local sewers as they need.[32] Nevertheless, it is difficult to find and keep good, dependable sewers, and the turnover rate among sewers is very high for many subcontractors. After acquiring the skill of operating high-speed sewing machines,[33] young sewers seek jobs with big exporters in Metro Manila, which often results in turnover rates of more than 50 percent within a six-month period.[34] Absenteeism and a "get-a-cash-advance-and-run-away" attitude among sewers are the major management problems for subcontractors. Their concerns about labor management may be seen in the "Rules and Regulations" posters often found on the walls in garment workshops (an example is shown in box 5-1 in English translation).

The nature of the labor market for the garment industry can be understood from an examination of newspapers. For example, the August 20, 1994, issue of the *People's Journal*, a popular English daily tabloid, published 140 recruitment advertisements; thirty-five (25 percent) were for sewers and revisers in the garment sector. The following day, in the same newspaper, the ratio was 35/129 (27 percent). About 50 percent of the advertisements were large, and had been placed by big garment exporters; the other 50 percent, placed by small garment subcontractors, were only a few lines long. The two subsectors compete with each other to recruit sewers. From a different perspective, the August 19, 1994, issue of the *Manila Bulletin*, an English daily read by the upper classes, carried only nine garment-related advertisements of the total of 220 recruitment advertisements (4 percent). This seems to show that highly educated manpower is not sought by the export garment sector.[35] One way for subcontractors to get good sewers is to recruit them through relatives or friends from such remote areas as Quezon Province and Visayas through relatives or friends. Because of substantial wage differentials between Laguna and these remote areas, it is easy to recruit sewers, as long as good connections are available. About one-fifth of the sample subcontractors use this recruitment method. Another source of reliable sewers is the population of former sewers of exporters, usually older persons, who returned to their home villages after marriage. Some of them are employed as supervisors and trimmers.

Box 5-1. Sample "Rules and Regulations" Posted at a Garment Subcontractor with Twenty Sewers

Company's Rules and Regulations

Time:	Start	7:00 – 7:15		7:16 Totally late
		10:00 – 10:30	Break time	10:31 Late
		12:00 – 1:00	Noon break	1:01 Late
		3:00 – 3:30	Break time	3:31 Late
		5:00 – 7:00	Dinner	7:01 Late
		7:00 - 10:00	Overtime	

1. A penalty of P5.00 will be charged each time an employee comes late for prescribed working hours.
2. Snacks will only be permitted during the break time.
3. Unnecessary standing, doing nothing, and chatting are strictly prohibited during working hours.
4. Smoking is not allowed during working hours, particularly inside the room.
5. Place cloth and thread at their designated areas. Do not scatter them.
6. Turn off the sewing machines, electric fans, and lights before leaving.
7. All employees are enjoined to accomplish their respective daily reports. No report, no pay.
8. Any worker found guilty of cooking foods during the working hours will not be granted an allowance privilege.

As a matter of compensation, those employees who strictly observe the above rules and regulations, without committing any violation in a given period, will be entitled to an incentive allowance of P50.00 per week.

Sewers working for subcontractors are, without exception, paid piece-rate wages. There are, however, at least two different systems of piece-rate wages; one is by operation and the other is by completed garment. In the former, the sewing process is divided into individual operations, and sewers are paid the piece-rate wage that has been set for their task, according to the number of pieces they finish. An example of such piece-rate wages by operation is shown in table 5-17. In the latter, a piece rate is set for each completed garment, and sewers are paid according to the number of garments they make from start to finish. The system of piece-rate wage by operation is commonly adopted by subcontractors for export. The system of piece-rate wage by completed garment is often applied in the RTW sector. Among the sample subcontractors, the latter system is used by only one operator, the owner of a premanufacture operation with a very small workshop in the most remote town in Laguna, but it is used by many home-sewers.[36]

Table 5-17 Sample Sewing Operations and Piece-Rate Wages, Baby Dress

Item	*Rate*	*Item*	*Rate*
Shoulder	0.10	Crotch-back	0.15
Arm hole	0.35	L-A-pocket	0.15
Sleeve garter	0.40	Side	0.30
A-collar	0.40	Crotch	0.30
J-collar	0.30	Lace-leg	0.20
Sleeve lace	0.20	Bib	0.20
Waist-front	0.20	Shirring	0.20
Waist-back	0.20	Back placket	0.20
Pocket	0.40	Edging-over all	0.35
Crotch-front	0.15	Edging-lace	0.15
		Total	P4.90

Note: Contacted price = P10.00/piece; payments to sewers = P4.90 (49 percent of the contracted price).
Source: Author's data.

Exporter-Subcontractor Relations and Quality Control

How can freelance factory operators become regular subcontractors to exporters? They first show the exporter their GTEB accreditation and the mayor's permit for operating a factory in their town. Then, a test is made to identify whether the subcontractor's sewing skill meets the company's standard. In addition to these checks and tests, some exporters ask their subcontractors to pay surety bonds every year. As long as a subcontractor's (or his/her sewers') skill is above a certain standard, it is not difficult to become a subcontractor for exporters. The demand by exporters for good-quality subcontractors seems to be quite strong. Many exporters search for good ones, for instance, by sending letters of invitation to the subcontractors on the GTEB subcontractor list and by visiting subcontractors in weak financial condition to persuade them to convert to a parent-child subcontractor relationship.

Subcontractors usually pay weekly wages to their sewers, while exporters pay subcontractors when the contracted garments are delivered, a few weeks to more than a few months after the contract work begins. The gap between the payments to sewers and the payments from exporters creates a serious problem for subcontractors who lack working capital. This problem is aggravated by a mode of payment that many exporters adopt: 50 percent is customarily paid upon delivery (after spot checks of the delivered garments), 40 percent a few weeks later (after finishing the final processes of garment production), and 10 percent is retained by the exporter. This 10 percent, which is paid to the subcontractor at the end of the year, is said to be insurance against nondelivery for the exporter.

Exporters' payments are made by postdated checks, so that even the first payment carries a built-in lag: subcontractors have to wait a few weeks to cash the checks. Subcontractors with financial difficulties sometimes have to take the checks to a rediscounter—who cashes them, taking a 5 to 20 percent fee, before their due dates. For subcontractors, par-

ticularly freelancers, good exporters are those who pay good prices and do not delay their payments.

It is quite important for a subcontractor to have a continuous flow of job orders from exporter(s). A long period without contracts not only makes firm operations difficult, but it also results in the dispersion of the sewers who are mobile, even when work is steady. One means exporters often use to exercise their control over subcontractors is to give special favors or priority to certain subcontractors in allocating orders. Exporters also make quick, on-time payments to favored subcontractors with whom they want to maintain contracts.

The seasonality in garment demand affects the employment pattern of exporters, as well as their relations with subcontractors. For instance, an exporter that does not depend heavily on subcontractors hires about 25 percent of their total labor force as casual workers; these individuals work during the busy season but are laid off during the slack season. For exporters who rely on subcontractors, the ability to grant priority in allocating orders during the slack season can be a strong means of control over subcontractors.

Subcontracting arrangements thus offer advantages to exporters, not only in exploiting cheap labor in rural areas, but also in dealing with the seasonality of the garment markets. At the same time, controlling the quality of garments made by subcontractors and assuring timely delivery remain the two major difficulties exporters face. It is of great importance that exporters who sell their garments to foreign buyers in bulk—tens of thousands of dozens of the same garments; for example, baby clothes or jeans—maintain a standardized quality. To deal with these problems, in addition to the control and incentive systems described so far, exporters utilize a variety of quality-control measures.

First, it should be mentioned that, in subcontracting between exporters and subcontractors, there is less room for cheating (such as stealing materials) than there was in the textile industries in England and Japan during the time the putting-out system was practiced widely (see Chapter 3 by Itoh and Tanimoto). Because the materials for producing garments—imported cloth and yarn—are given to subcontractors in the form of cut pieces, which can be counted exactly,[37] and because the work subcontractors perform on contracted garments usually ends just before the final products are completed, there is little room for the subcontractors to cheat. Unlike sewing, the cutting of cloth, while requiring more skill, could present more opportunities to cheat, and this is why the process is performed by the exporters themselves or by subcontractors that specialize in cutting.

The most direct measure of quality control for exporters is the check or quality inspection (called a quality audit) conducted at the exporter's factory when finished garments are delivered by subcontractors. In the case of rush jobs, exporters make this quality inspection at the subcontractor's work site when they collect the finished garments. If substandard garment products are found, they are rejected, and revising is needed. Rejections also occur during the final production processes in the exporter's factory. If there are many rejections, the rejected garments are generally returned to the subcontractors for revision; if there are only a few, the revisions are made by the exporters, and the rejected pieces are deducted from the payments.

Some exporters send their quality controllers (QC) to make final inspections at the subcontractors' factories. The QCs make sample checks of 4 to 5 percent of the finished garments; if major defects are found in a given percentage—10 percent of the sample, for example—the entire batch is rejected for revision. If defects are found in a smaller percentage, the entire batch is accepted and packed immediately for export. This method is apparently used for subcontractors whose skill level is relatively high.

Another measure of quality control, which is more process oriented, is direct visits by exporters' employees to subcontractors' factories. Although the frequency and intensity of visits differ among exporters, or for an exporter among its subcontractors, this measure is almost universal. Foreign merchandisers sometimes visit subcontractors, without notice to the exporter involved.[38] There are two forms of visits by exporters: one is mainly to inspect the progress of subcontractors' work and is usually carried out by an industrial engineer from the production coordination department, and the other is purely for quality control and is the responsibility of employees dispatched from the quality control department. Both visits involve quality control, but the latter is more of a final check. Subcontractors do not usually distinguish between these two kinds of visits and call them both QCs.

For parent-child subcontractors, QCs stay at the subcontractor and usually report to their company only once a week. In such an extreme case, these subcontractors are a de facto branch of the exporter. For freelance subcontractors, the frequency of QC visits varies, from daily to weekly for each job contract; the frequency probably depends on the skill level of the subcontractor and the distance to the exporter's headquarters. In any case, a large number of QCs from garment exporters travel around rural areas every day to visit the subcontractors assigned to them.

Yet another measure to control quality and to encourage subcontractors' work is to set incentives and penalties. Many exporters adopt incentive payment systems that provide additional payments, ranging from 5 to 25 percent, to subcontractors who deliver their contracted garments before the specified due date. The system is often constructed so that the earlier the delivery, the higher the additional payment. The system is frequently balanced by a penalty system when subcontractors fail to meet the due date. Another penalty system, keyed to the quality inspection upon delivery, is adopted by many exporters: if the rate of rejection of a batch of delivered garments exceeds a selected percentage, money is deducted from the payment at a rate that increases as the percentage of rejected garments rises.

The quality inspection of delivered garments at the exporter's factory is a popular source of complaints from subcontractors. When exporters pick up the finished garments, make the inspection at their factories, and reject garments during the final processes there, the checking is done in the absence of the subcontractors, and the reduction of payment is calculated by the exporters without the consent of the subcontractors. The criteria for rejections are thus not clear to the subcontractors. In some cases, it appears that exporters make sporadic rejections just to demonstrate their strict quality controls. Some quite capable subcontractors, when told that a quantity of their garments had been rejected, were able to prove that the rejected items were not theirs; these subcontractors had put some identification on their garments that was not easily visible.

The Role of Government

The government has played an important role in the development of the garment industry in rural areas. The new drive for garment exports, begun during the 1970s through tax privileges for export industries and export processing zones (EPZs), as well as other means, has strengthened since the late 1980s as the political turmoil associated with the downfall of the Marcos regime has receded.

The vigorous efforts by the government in this area are readily apparent if one visits the Garment and Textile Export Board (GTEB), a government organization established under the auspices of the Department of Trade and Industry (DTI) to promote garment and textile exports. A visit to the office shows it to be bubbling with enthusiasm for promoting the garment export business: swarms of applicants for accreditation certificates for garment subcontracting are rushing to the counter; many exporters are busily asking the officers in charge for the list of subcontractors, applying for export quotas, or checking the status of their imported materials; and foreigners are inquiring about possible partners for joint ventures. The government has clearly played important roles by coordinating and providing information.

The same enthusiasm prevails in the DTI offices at the regional level.[39] These offices try to promote the garment industry in rural areas through a variety of programs, including the provision of consultation services and seminars for potential subcontractors. Tax exemptions for subcontractors for a set period after their establishment also encourage potential entrepreneurs to enter the industry. Many municipal governments in rural areas hold training courses for rural youths and housewives to help them develop sewing skills using high-speed and other special machines.

These programs, however, seem to be the total contribution of the government to the garment sector in rural areas. Many policies have been implemented repeatedly to promote rural industries, such as subsidized credit and input subsidies. But the impact of these policies is barely visible in the rural garment sector. Very few sample subcontractors obtained institutional loans. This means that the transaction costs to obtain institutional credit are too high for small rural entrepreneurs.

A major reason that exporters put out their garment production to subcontractors is the wage differential between the urban labor market, governed by minimum wages and other labor regulations, and the rural labor market, in which such regulations are absent. If the government had tried to implement these regulations in rural areas, the development of the rural garment industry would have been much less significant.

All this suggests that the government should concentrate its efforts on supporting the markets, rather than trying to intervene in the market mechanism. The provision of public infrastructure, a responsibility that has traditionally rested with the government, is important to such efforts. For example, the development of efficient road and highway networks connecting urban centers with outlying regions would help rural industries develop in remote rural areas by reducing travel time between the rural areas and the centers, which would reduce the transaction costs involved in subcontracting arrangements. The devel-

opment of industrial centers in regions other than Metro Manila through the provision of infrastructure (such as ports and EPZs) is also important if rural industrialization based on subcontracting is to succeed.

What rural entrepreneurs in the garment sector need most is information on subcontractors, exporters, foreign buyers, available technologies, and so forth; the provision of adequate and efficient information is essential. The government can also play critical roles in research, training, and technology extension, including research on trends in foreign demand and labor and industrial management technology, training for skill development among sewers/special machine operators, and seminars for owners/supervisors of garment subcontracting firms to enhance knowledge/technology on labor management/methods of quality control, and the like. In these respects, the GTEB's performance to date may be adequate in its direction, but there are many areas that can be improved and strengthened.

Conclusions

The rapidly growing export garment sector in the Philippines has given rise to garment firms in rural areas adjacent to Metro Manila. These firms engage in the production of garments under subcontracting arrangements with exporters/contractors who contract garment production with foreign buyers, who in turn act as the principals of these contracts. The major reason for exporters to put out garment production to subcontractors is to utilize cheap labor in rural areas—wage levels are 50 percent lower than in the urban sector—by avoiding the minimum wage and other labor regulations enforced in the metropolitan area.

Subcontracting in the export garment sector is not limited to sewing. Subcontracting firms for other services, such as embroidery, knitting, beading, and the like, have also burgeoned. Because the technology used in the garment industry is labor intensive, the spread of garment subcontracting in rural areas has created employment opportunities with low opportunity costs. More fundamentally, the rise of the export garment sector gives an opportunity for "new" rural entrepreneurs to create a new rural industry. Because of its colonial heritage, there have been few rural industries in the Philippines, except some agro-based industries run by "traditional" entrepreneurs.

The impact of such recent changes can be observed clearly in Laguna, where the garment industry has been insignificant, not only in export but also in ready-to-wear garments for the domestic market. Since the early 1980s, a number of garment subcontracting firms have emerged in the rural areas of the province. Seventy percent of these new entrepreneurs are from rural farming communities. Unlike traditional entrepreneurs, who are either from the landed oligarchy or from the Chinese merchant class, many of the new entrepreneurs are from the peasant class. Both the rice- and coconut-growing areas in the province produce rural entrepreneurs, but it appears that the coconut area yields a greater number. Because coconut is a commercial crop, peasants engaged in this area would be

more readily trained as rural entrepreneurs. Furthermore, many subcontractors of rural origin have engaged in trading (buying and selling) coconut or rice, which supports the contention that rural commerce is a cradle for fostering rural entrepreneurs (Hayami and Kawagoe 1993).[40] Many subcontractors started their garment businesses as sub-subcontractors and then became subcontractors. Opportunities are also open for subcontractors to climb to the exporter/contractor level. If they can obtain export quotas and find foreign investors, it is possible for subcontractors to become exporters/contractors. Thus, the ladder from peasant to rural entrepreneur—and further, to modern industrialist—does exist, however narrow it may be.

A necessary condition for being a successful subcontractor or to succeed to exporter is the ability to develop good personal relationships with people, including sewers; exporters' employees, such as managers, merchandisers, finance clerks, and quality controllers; foreign buyers; and government officials. This is the skill fostered in commercial agriculture and trade activities in rural areas. The college-level educations achieved by most subcontractors may also be useful in fostering such skills. If so, however, what is useful in entrepreneurship would not be specific knowledge or skill, but the wider perspective and higher aspirations obtained in college life.

A critical factor underlying the rapid diffusion of the garment business in rural areas is the ease in entering the industry through subcontracting. Special skill or experience in the industry is not a prerequisite. The technology used in the industry is neither very sophisticated nor capital-intensive. The initial investment requirement is not large. Many subcontractors began their businesses with a few ordinary sewing machines, easily affordable for rural people from their savings or by borrowing from relatives or friends. Furthermore, the active market for secondhand machines with the common arrangement of purchase on credit is instrumental in keeping the initial investment needs low.[41] As in other industries that adopt the putting-out system, quality control for garments made by subcontractors is important to exporters/contractors. A number of measures are adopted for quality control, such as sending quality controllers to subcontractors' factories, quality inspection upon delivery of finished garments, checking and rejection during the final process of garment production at exporters' factories, and retaining a part of the payment to subcontractors. There are also many measures to avoid opportunistic behavior on the part of subcontractors, which can include stealing supplied materials or not meeting the delivery date. These measures include preferential allocation of job orders, prompt payments, retention of a part of payments, incentives and penalties for beating or missing delivery dates, and so forth. Because cloth is given only after it has been cut into pieces and parts and counted exactly, there is not much room for cheating by subcontractors.

Quality control within subcontractor workshops is carried out by the owners themselves and by hired supervisors/revisers. Their garment production process is divided into as many pieces as possible. The piece-rate wage payments for the countable work divisions seem to function well as a built-in measure of work monitoring and enforcement.

The government has played important roles in the development of the garment industry in rural areas, but its contribution is mainly the promotion of garment exports through

tax privileges for exporters and rendering such services as coordination and information provision for exporters and subcontractors. In the rural garment industry, it is hard to find a positive impact of the policies that intervene directly into markets. The case study in this chapter suggests that the government should concentrate its efforts in supporting the markets, rather than trying to intervene in the market mechanism. Further improvements in public infrastructure, information provision, and research and technology extension in the garment industry are the fields in which the government should—and can—play critical roles.

Notes

1. As the rural household industry declined, the percentage of the labor force engaged in agriculture increased from 51 percent in 1902 to 61 percent in 1918, and further, to 71 percent, in 1938 (Resnick 1970: 64).

2. The lack of knowledge and ability among tenant-farmers and agricultural laborers—even as agriculturists—was the first pretext given by the landlords who were against the programs when land reform programs were envisioned and implemented (Hayami and others 1990a).

3. Among the sectors earning foreign exchange in 1993, the garment sector was the second-largest earner (P62 billion), exceeded only by remittances from overseas Filipino workers (P71 billion), and followed by the tourism sector (P57 billion) and electronics exports (P50 billion).

4. Another garment subsector not shown in this figure, although related only to marketing and not to production, is secondhand garment transactions. This subsector could still be of some importance in poorer sections of society, urban as well as rural, but is not discussed in this chapter because of the lack of information.

5. Philippine garments are exported to two groups of countries, quota and nonquota countries. Quota countries are the United States, EU countries, Canada, and Norway (total export value of US $1,869 million in 1993); all other countries are nonquota countries (total export value of US$473 million in 1993), of which Japan; Hong Kong, China; and the United Arab Emirates are major importers. This means that for a garment firm to be an exporter, it is a near necessity to have export quotas (EQs), which are allocated by the GTEB according to its rules and regulations.

6. RTW firms for high-end markets usually get contracts through the merchandisers of supermarkets and department stores; garment contractors for export get them from foreign merchandisers. In domestic markets, the kind of garments/apparel to be made depends heavily on the garment firms: unless they can produce apparel fashionable enough to attract customers, they cannot survive. Therefore, they make the utmost effort to collect information and ideas on what is popular. It should be noted, however, that RTW firms for low-end markets also make an effort to update their fashion sense, although to a much lesser extent. In contrast, contractors and subcontractors for export garments, particularly the latter, do not need to gather such information.

7. One may wonder if imported materials with tax-free privileges, to be used for garment firms for exports such as textile/cloth and thread/yarn, might be diverted to those for the domestic market. Such moral hazards are prevented, at least between contractors and subcontractors, as explained in this chapter.

8. There are certainly other exceptions to this statement. In addition to the towns in the urbanized northwest corner of the province, one finds some traditional rural industries in towns in Laguna: jeepny building in San Pablo City, footwear factories in Liliw, and woodcarving in Paete. These industries, however, are by no means widespread, and it can be said that until quite recently the "agrarian separation and agrarian division of labor" described by Resnick (1970) were applicable to Laguna.

9. In spite of past attempts to implement land reform programs, few rice owner-operators have been created in Laguna (see, for example, Otsuka 1992).

10. Distance is a cost to subcontractors too. Information on the subcontracting market becomes more difficult to obtain as the distance from Metro Manila increases. For instance, the subcontractor in the most distant town in Laguna, when she set up her garment firm, obtained information about the industry from an RTW firm operating in a nearby town in Rizal Province, on the other side of the lake, not from someone in Laguna.

11. Among the Laguna subcontractors, eight maintain liaison offices in Metro Manila in addition to factory/workshops in Laguna. All of them are also from Laguna I.

12. In the case of baby clothes with smocking on the front breast and embroidery on the pockets, for example, imported cloth is first put out to cutting subcontractors who cut pieces, including the front breast and pocket parts; the former parts are put out to smocking subcontractors and the latter to embroidery subcontractors. After getting these smocked and pocket parts back, all parts are brought to sewing subcontractors for assembly.

13. This sample subcontractor in Laguna I was interviewed when he was visiting one of his fellow subcontractors, whose workshop is located in a Laguna II town.

14. It is said that there are now as many as 300 garment factories in Tatay. All of them, except a few that have recently converted to subcontractors for export, are RTW firms.

15. According to subcontractors, these parts are difficult and need special skills and machines. For example, the machine to make a buttonhole for jeans, called an "eyelet," is as expensive as a brand new Mercedes Benz. It seems, however, that exporters make these parts in the factories partly for the purpose of quality control.

16. Of the forty subcontractors in the sample, sixteen have been working for only one contractor. Not all of these sixteen are of the parent-child variety; some are looking for better contractors.

17. This is because transaction costs for contractors become too high to have such small subcontractors with tiny lot sizes for contracted garments.

18. Few ordinary manual sewing machines without motors are used in the garment industry, except by some tailors and unorganized home-sewer subcontractors for RTW.

19. It should be noted that the average sewer's wage in the sample RTW firms is higher than that of exporters. This difference is probably because the RTW firms, particularly those aimed at high-end markets, usually employ highly skilled sewers.

20. Among subcontractors, there is no significant difference between those of rural origins and those of nonfarm origins in the owner's age, years of operation, and firm size.

21. As stated earlier, three-fourths of the subcontractors have received higher education. At college, most enrolled in the school of commerce, majoring in banking and finance, accounting, or business administration. A few studied education, and one chemical engineering. It is interesting to note that the majority of newly emerging rural entrepreneurs in the cotton textile industry during the late Meiji period (around 1900) did not have any experience in the industry when they started textile factories (Amano and Abe 1989).

22. This, of course, does not mean that there is no need to provide bank loans for entrepreneurs in the garment industry. Many sample subcontractors expressed a need for bank loans, particularly for working capital, for which commercial banks do not lend without collateral. In one reported case, a subcontractor had to borrow working capital from a *five-six*, a usurious moneylender who lends 5 pesos on Monday and recovers 6 pesos on the following Monday, a weekly interest rate of 20 percent, or a monthly rate of about 100 percent. Although not listed in the table, many subcontractors obtained loans in the form of machines purchased on credit. Markets are well developed, not only for brand new machines but also for secondhand machines, and purchase on credit is widely practiced.

23. Some of them resigned from office when they started their garment businesses, but others continue to work while managing their garment firms.

24. An extreme case of this public consideration for employment creation among concerned people in rural areas is the establishment of garment factories by agricultural cooperatives or religious missionaries. There are at least three garment subcontractors like this in Laguna, two of which are in our sample: one was founded by an agricultural cooperative and the other is an association of sewers formed by a Roman Catholic church.

25. The ability to be a good entrepreneur may be clearly revealed when management environments become harsh. Many subcontractors with upward aspirations gained large benefits from their business when electricity was not provided steadily in the early 1990s, an event that hit the garment industry hard. The subcontractors acquired their own generators, at a price roughly ten times that of the most expensive high-speed machine.

26. This seasonality problem is similar, or even greater, in the RTW sector for domestic markets. In order to deal with the slack season, for example, one of the sample RTW firms aiming at high-end markets operates a side business of renting student caps and gowns for graduation ceremonies held during this lean season.

27. As mentioned earlier, garment subcontracting is easy to enter because it doesn't require much skill or capital. But this does not mean that subcontractors perform the same way. Performance varies enormously, depending on the owner or manager's ability in management, particularly labor and financial management.

28. In the sample in this study, there is a sub-subcontractor who gets 100 percent of his job orders through this kind of subcontractor. This sub-subcontractor provides a workshop and hires sewers, while the subcontractor provides all the machines. The subcontractor takes 35 percent of the contracted price as a return for her services and machines.

29. They approach less-experienced subcontractors who have difficulty securing sufficient job contracts, give them a job, and, after receiving the finished garments, disappear without paying for the job.

30. Although younger generations dominate, female sewers are from all age groups. It is rare to see older male sewers.

31. You can buy 4 to 5 kilograms of white rice daily out of this wage.

32. The simplest method of recruiting sewers is to hang a "Sewers Wanted" sign at the gate of the garment workshop.

33. Having sewing skills helps a sewer find an employer, but it is not necessary. Many subcontractors say that one to two weeks of training is sufficient even for novices, and some prefer recruiting and training fresh workers over hiring "secondhand" sewers.

34. In contrast, the turnover rate of workers is very low in exporters' factories (see Ohno 1994).

35. The advertisements that took the largest space in these newspapers, but were not the largest in number, were for overseas employment. Another noticeable feature is that there are few recruitment advertisements from the electronics industry, which has developed as rapidly as the garment sector in the value of exports. This may partly be the result of the low labor absorption power of this industry, and partly a result of the different kind and class of worker required by the industry. Whereas the garment sector recruits those who have some skill, almost regardless of age, the electronics industry wants trainable, not trained, persons who have graduated from high schools, vocational schools, and colleges.

36. Although this study does not explore how large exporters manage their labor process, of the four sample exporters, the two that used to be subcontractors still adopt piece-rate wages for their in-house sewers; also, the manager of another exporter complained repeatedly that because of the tight government labor regulations, he could not adopt the system of piece-rate wages, so it is difficult to motivate sewers to work hard and to monitor workers' efforts. On labor management and quality control in a large garment exporter in Manila, see Ohno (1994).

37. Checking the number of pieces for all the parts upon delivery by an exporter is an important and laborious task for a subcontractor. If the number of some parts is less than specified, it must be reported to the exporter within a specified period, usually a few days. Otherwise, the exporter deducts the cost for the deficit in parts from the payment to be made to the subcontractor, assuming that the subcontractor lost them.

38. The necessity for this monitoring of exporters/contractors by foreign merchandisers or buyers may indicate that moral hazard could arise on the part of exporters/ contractors. This could indeed be the case, because room for maneuvering is large for exporters who handle raw materials imported without tax or duty.

39. When I visited a DTI regional office, I was enthusiastically welcomed by the officer in charge, who mistook me for a Japanese businessman seeking investment opportunities in the garment sector in the region.

40. The positive correlation between the commercial nature of the agricultural crops and the burgeoning of rural entrepreneurs is found widely in the early stage of modern economic growth in Japan. See, for example, Amano and Abe (1989) on how indigo production fostered rural entrepreneurs in Tokushima Prefecture in Japan during the late nineteenth century.

41. One may recall that, in the interwar period in Japan, easy entry, backed by development of the market for secondhand power looms, was an important condition for Japanese rural entrepreneurs to join the cotton textile industry, the most popular rural industry of the time (Saito and Abe 1987).

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6

The Rural Garment and Weaving Industries in Northern Thailand

Akihiko Ohno and Benja Jirapatpimol

The recent, rapid industrialization of Thailand has been realized by an enormous influx of foreign direct investment in the manufacturing industries of Bangkok and neighboring provinces. The resulting concentration of factories caused hyperurbanization in the metropolitan area, which has produced skewed distribution of income and employment opportunities. Rural Thailand is struggling with poverty, unemployment, and underemployment, and urban-based industrialization cannot be an effective remedy for these problems. Great expectations are placed on the development of rural household nonfarm industries, which are more labor intensive and make fewer demands on scarce capital resources than do their modern, large-scale counterparts. These characteristics of rural household industries have often been put forward as a strong argument for government policies in their support.

The purpose of this chapter is to identify the socioeconomic factors that facilitate the market competitiveness of the rural household textile industries in the process of economic development. Our inquiry is focused on rural household enterprises in the ready-made garment and hand-weaving industries in northern Thailand—Chiang Mai and its environs. Both are labor-intensive sectors of the textile industry. This region has recently witnessed a mushrooming of rural household enterprises in these sectors (Mead 1981; Amara and others 1989; Angkarb 1990; Sungidh and Poonpanich 1994), followed by the establishment of modern garment factories (table 6-1).

The most crucial condition for an industry's survival is its market competitiveness. Any support to an industry that is insufficiently competitive will result in wasted resources and, consequently, will have an adverse effect on the national economy in the long run. It is interesting to note that the growth of these two rural household industries gained momentum

Table 6-1. Modern Garment Factories in Chiang Mai Province

Year established	*Employees*		*Location*
	Male	*Female*	
1978	23	435	C
1979	17	390	S
1980	10	70	S
1984	4	160	S
	22	170	
1987	5	147	C
1988	12	100	C
1989	8	130	
	—	120	S
	20	282	S
1990	5	75	C
	25	173	
	26	165	S
1991	2	100	S
	15	84	S
1992	3	64	C
1993	30	50	
	12	—	S
	—	204	
1994	—	90	
	—	60	S

Note: C and S represent Chiang Mai Town and Sankampeang, respectively; blanks represent other locations.
Source: Thailand, Ministry of Industry 1995.

after the areas began to industrialize at the beginning of the 1990s; until recently there were few large-scale modern textile factories in the region. In addition, the growth of the rural household industries was achieved without explicit government intervention. Accordingly, we can safely state that these rural household industries are sufficiently competitive with their modern counterparts. The region is, therefore, an appropriate area for the study of issues related to rural household industries during the early stages of industrialization.

The textile industry in northern Thailand is composed of a modern, large-scale sector and a rural household sector. Although large-scale handloom weaving factories are not as prevalent as large-scale garment factories, in Sankampaeng, for example, a large weaving factory (Workshop G) employs more than 200 workers and has 90 handlooms. Technological differences are generally used to demarcate the modern and rural household sectors. Technology, however, does not appear to be a significant factor distinguishing the two sectors in either of these two industries, because they use the same production tools—sewing machines and wooden-frame handlooms. This allows us to compare the organizational efficiency of the modern and rural household sectors without having to consider the effects of technological differences.

As we illustrate below, the rural sectors of the garment and weaving industries show distinctive characteristics in their origins, modes of contractual relationships with urban businesses, and types of entrepreneurship. An investigation of the rural household industries from a two-dimensional perspective, comparing the rural and the modern sectors and the garment and the weaving industries, offers a key to identifying the economic and social factors that promote or impede the development or rural household industries.

The villages surveyed are mainly located in the Sankampaeng, Chom Thong, and San Patong districts of Chiang Mai Province and in the Basang district of Lamphung Province. They are all upland areas situated around the periphery of the Chiang Mai valley and are agriculturally backward areas because of inadequate water supply. It is often pointed out that agricultural sterility provides fertile ground for rural nonfarm industries.[1] All the rural informants are female (most of them married), since the rural textile industries are traditionally the exclusive domain of women.[2] Our research was conducted in March 1994.

History of the Thai Textile Industry

Evidence from archeological excavation has confirmed that the Thai people of prehistory learned to use natural fiber for cloth weaving in order to make clothing and other useful materials, and this ability continued, through the Sukothai and Ayudhaya periods to the modern time. Cloth was woven in the past for household use and for sale to local people, as well as to neighboring countries. Several historical studies reveal that products from the Thai textile industry were traded with China, Laos, Burma, and England during the nineteenth century, with Bangkok and Chiang Mai acting as the centers for the Central and the Northern regions respectively (Bowie 1992).

Thai cloth weaving in the early period employed simple throw-shuttle handlooms. A Silk Craft Department was set up in 1909 in the reign of King Rama V, and a Silk Craft School was established. This activity was extended to other provinces—Nakon Rachasima and Buri Rum. Since then, cloth weaving has changed from a mere household activity to production outside the household. In addition, fly-shuttle handlooms were introduced in the middle of King Rama VI's reign, although they were not yet popular among Thai people.

The picture of the Thai weaving industry drastically changed with the use of the power loom and the development of the modern weaving and the initiation of the ready-made garment industry. It is said that in the 1960s modern textile production not only had replaced import needs, but had also nearly superseded the old method of production. Although the household weaving industry declined, it picked up in some areas when domestic and foreign markets for artisanal goods were created through development of the relational contract. This is where our story on the hand-weaving industry starts.

The ready-made garment industry expanded in the 1980s, and in some years it had the highest export value among all export industries (Supat 1992). Up until 1991, there were 2,029 factories producing garments, ranging from those with fewer than 10 to those with

more than 1,000 sewing machines. Nevertheless, the stated number could be lower than the actual number of factories because small factories, with fewer than thirty (now ten) sewing machines, were not required to register as factories. Most small factories tended not to register because they wished to evade the regulations involved. Since most of garment factories were initially located in Bangkok and its metropolitan region, the government had a policy to distribute siting of industries into the provinces by giving privileges to factories scheduled to locate outside Bangkok, in such locations as Chiang Mai. This is where our story on the garment industry starts.

Scope of Analysis

This chapter is mainly concerned with entrepreneurship and the mode of transactions between rural and urban businesses, and it attempts to analyze the emergence of rural household industries in northern Thailand.

Entrepreneurship

The entrepreneurial or managerial functions necessary for the complex task of operating an enterprise are mainly in the areas of marketing management, including procurement of raw materials; labor management; and financial management. All these functions are usually performed by the same person, the entrepreneur-manager, in household enterprises. In a rural setting, people seldom have formal training in functional areas, and therefore the entrepreneurship necessary for success in enterprises is often thought to be absent in a rural society. If this is true, what explains the present prosperity of rural household enterprises in northern Thailand in tandem with industrialization? We approach this subject by investigating the areas in which rural entrepreneurs have advantages or disadvantages compared with their urban counterparts.

Rural household enterprises, because of their small size and the difficulty in communicating with the outside world, are said to suffer from managerial disabilities, with the most critical in the area of marketing. Rural manufacturers, in general, struggle with difficulties in knowing and exploiting the needs of urban and overseas consumers. This suggests the importance of accessibility not only to marketing channels, but also to information concerning product details, which change according to the needs of consumers. Also, the procurement of raw materials suitable for marketable products is a crucial, but difficult, aspect of marketing.

Insufficiency of funds brought about by a weak collateral position and poor access to credit are often suggested as other obstacles to the development of rural household industries. This argument is unconvincing, however, because the capital requirements for rural household enterprises are not always prohibitively large. This capital bottleneck thesis thus must be reconsidered with regard to both fixed and working capital.

We assume that rural household enterprises have an entrepreneurial advantage over their modern counterparts in the area of labor management. Two points may clarify this

perspective. First, the enforceability of labor contracts, which are often implicit, is one of the major problems associated with employment relations. In the absence of an enforcement mechanism, no labor contract would ever be completed. In the early stages of industrialization, an insufficient formal enforcement mechanism, in the absence of a trained middle management, often casts doubt on the superiority of the factory system over rural household enterprises. In addition, although the creation of a disciplined workforce is imperative for successful factory management, newly recruited factory workers from traditional societies offer tenacious resistance to factory organizations (Thompson 1967; Smith 1988; Clark 1994).[3] This often leads to counterproductive behavior among workers, such as high turnover, absenteeism, lack of work discipline, and low morale (Ohno 1994). One can assume the possible predominance of informal over formal labor control in the early stages of industrialization, and this may offer a key to understanding the advantages of rural entrepreneurs over their urban counterparts.

Second, the degree of compliance with labor regulations in Thailand is not high, particularly among small enterprises (Naruemol 1993). Such enterprises can avoid the costs imposed by labor regulations, such as those concerning minimum wages, overtime, paid leave, maternity leave, and welfare facilities for workers. Accordingly, this dualism endorses comparative advantages for rural household enterprises in the labor market. It follows that the more rigid the regulations on the modern sector, the more advantageous and attractive the rural household sector becomes.

Mode of Transactions

A distinctive feature of rural household enterprises in northern Thailand is their heavy reliance on urban businesses in the relational contracting system. However, while the putting-out system is widely used in the ready-made garment industry, this practice is rarely observed in the weaving industry. Instead, advance-order contracts (or guaranteed-purchase contracts) on a continuing basis are prevalent in the rural weaving industry.[4] This contrast demonstrates how the rise of rural household enterprises occurred.

Putting out is often seen as a transition phase from the craft shop or the guild system to the factory system (Wardell 1992). Landes (1969) finds the reason for the transition in "the usual difficulty of compelling performance by cottage workers" (work control) and "the poor quality of hand work" (quality control), which he refers to as "the frictions inherent in putting out." This shift can be achieved, as mentioned above, only when a system of formalized supervision is smoothly institutionalized in hierarchical factory organizations. When no such system exists, difficulties in work and quality control will cause managerial problems, even in the factory system. This is where we assume that informal labor control predominates over formal control in the early stages of industrialization. The shift of production from the cottage system to the factory through the putting-out system is not a universal historical sequence (see Chapter 1 by Hayami). The predominance of putting-out arrangements in northern Thailand since industrialization requires a different perspective on the new role of the putting-out system.

Hypotheses

On the basis of the above discussion, the following hypotheses were framed to explain the dynamic growth of rural household enterprises after industrialization began in northern Thailand.

HYPOTHESIS 1: Rural household enterprises have a comparative advantage in labor management compared with modern enterprises, whereas rural enterprises suffer from a disadvantage in marketing, especially in the early stages of economic development.

HYPOTHESIS 2: As a corollary of hypothesis 1, the relational contracting system—in the form of either a putting-out contract or an advance-order contract—is a device that allows rural household enterprises to overcome disadvantages in marketing. Conversely, it is a device for their large-scale counterparts to overcome difficulties in labor management.

Needless to say, the relational contracting system solves the problems of adverse selection and moral hazard, which are not only the frictions inherent in the putting-out system as Landes pointed out, but also are frequently observed in the imperfect market.

The Garment Sector

The large garment factories of Thailand have recently begun to move gradually toward reliance on putting out part or all of the production process to small workshops in villages. Putting out in the ready-made garment industry involves about 280,000 workers in Bangkok and 500,000 workers in other provinces (table 6-2).[5]

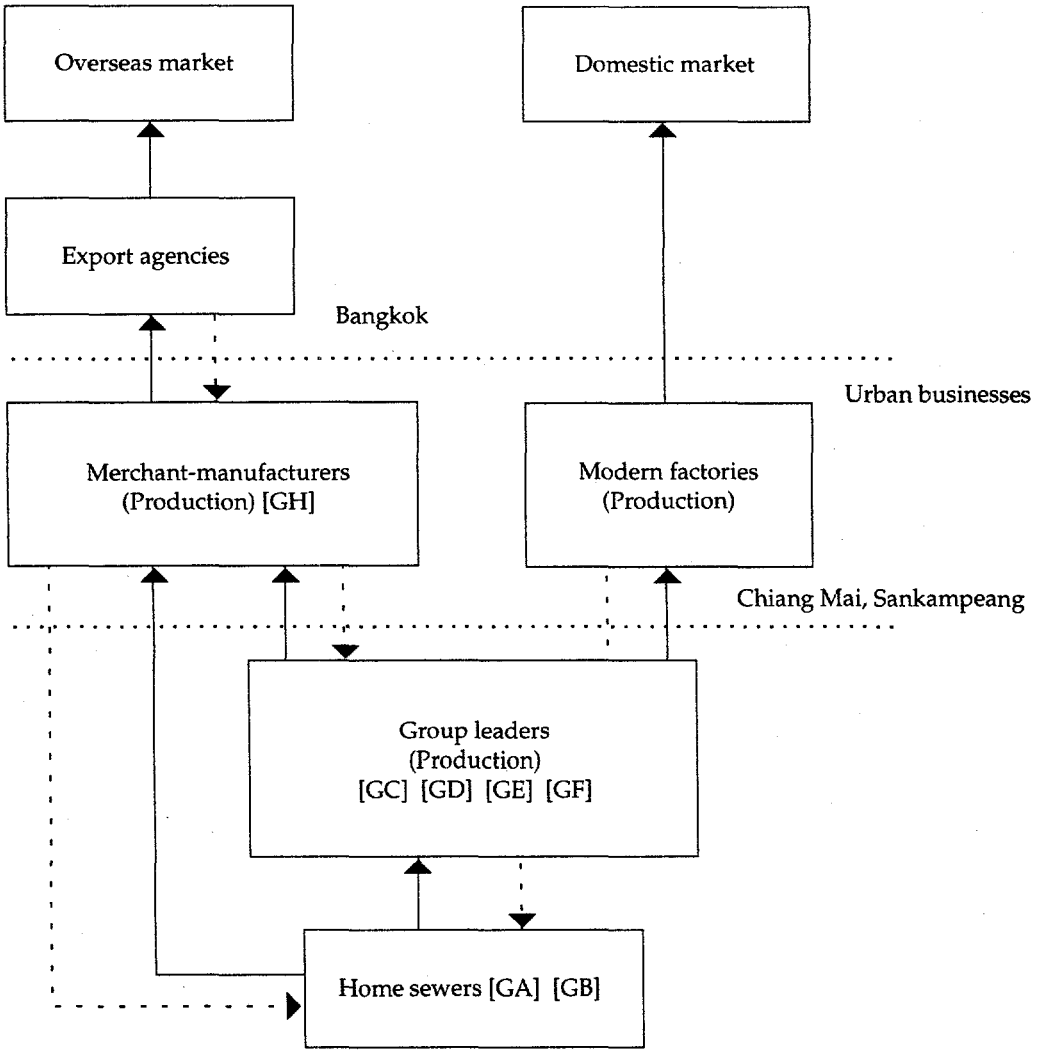
The marketing process for ready-made garments in the putting-out system in northern Thailand is depicted in figure 6-1. Although its contractual arrangements take a variety of forms, the system consists of three distinctive tiers: urban businesses (the principals), group leaders (the subcontractors or agents), and the sewers. Although there are group leaders

Table 6-2. Pattern of Employment and Wages in the Ready-Made Garment Industry

Producer	*Number of workers involved*	*Wages per day (baht)*
Modern factory	17,000	80–100
Putting-out		
Bangkok	280,000	70–80
Other provinces	500,000	50–70
Total	797,000	

Source: Sungsidh and Poonpanich (1994).

Figure 6-1. The Marketing Process in the Rural Garment Industry



Note: Solid and dotted lines denote the flows of finished products and raw materials (fabrics), respectively.

in the weaving sector as well, they do not rely on the putting-out system. Therefore, in this chapter the term *group leaders* is used interchangeably with *subcontractors* or *agents* in the garment industry. Urban businesses are either modern garment factories or wholesalers; wholesalers are middlemen bound by contract to work for a particular exporter in Bangkok. The group leaders are supplied with raw materials, especially fabrics that generally have been precut. The leaders bring the sewers together at their premises (hereafter, *workshop sewers*), distribute the fabrics supplied among the sewers working at home (hereafter, *home*

Table 6-3. Workshops Studied

Workshop	*Workshop worker*	*Home worker*	*Year of opeation*	*Note*
Garments				
GC	0	8	3	Orders from a trader in Sankampeang
GD	6	2	7	Orders from a modern factory, ex-factory worker
GE	5	0	3Ms	Subcontractor of GD, used to work for GD
GF	0	12	2	The industrial estate, rather impersonal labor relations
GG	2	7	7	Orders from a modern factor, ex-factory worker
GH	20	Va	10	Merchant-manufacturer, difficulties in labor management
Weaving				
WA*	5	2	3	A food-processing zone, custom order for local consumption
WB*	3	12	20	Outskirts of Sankampeang town, sample orders, low quality
WC+	9	46	20	Remote upland village, medium quality, loose supervision
WD*	21	40	10	Distance of 60 km from town, time-rate wages for preloom activities
WE+	35	105	20	Traditional homeweaving area, workers engaging in QC
WF*	30	0	0	Superior varieties, no piece-rate wages, promotion system

Note: Ms = months; Va = variable; * = widow; and + = village chief's wife.
Source: Authors' data.

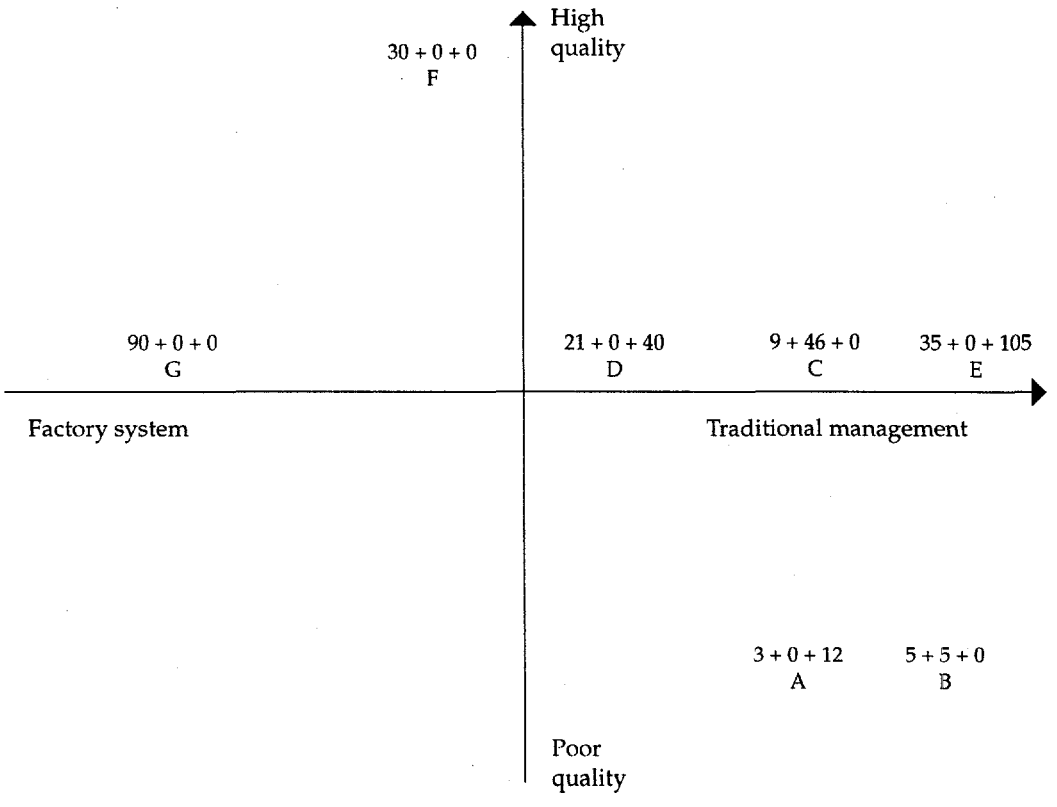
sewers), or use a combination of the two systems. Individual cases of these entrepreneurs (shown in table 6-3) from our field survey data are presented in Appendix 6-1.

The Weaving Sector

The marketing process in the weaving sector is simpler than that in the garment sector. The weaving leaders in the villages have links with particular wholesalers or export agencies on advance-order arrangements. That is, the urban traders do not supply the leaders with raw materials. As in the garment workshops, the weaving leaders bring weavers together at their premises (hereafter, *workshop weavers*), subcontract work out to home weavers, or employ a combination of the two techniques. The leaders supply their weavers with cotton yarn dyed at their premises and arrange for the sale of the finished products.

Although their marketing system is simple, the weaving workshops have a wider variety of organizational styles than do those of the garment sector. The overall picture of the sample workshops surveyed (from WA to WG) is indicated in figure 6-2, along the axes of

Figure 6-2. Cases of the Weaving Industry



Note: Number of looms = leaders' premises + lending out + home-workers homes.

"product quality" and "mode of labor management." The horizontal axis corresponds to the continuum of the factory system based on formal labor control compared with the traditional system based on informal labor control.

The weaving process can be divided into two stages: preloom activities (dyeing, loosening and unwinding, pirn winding, warping, and sizing) and loom-stage activities. In this chapter, the latter is emphasized. Individual cases of rural entrepreneurs (table 6-3) in the weaving industry are presented in Appendix 6-2.

Characteristics of Rural Entrepreneurs and Workers

Although there is a variety of leaders and workers in both the garment and weaving sectors, some common features can be identified.

Group Leaders as Rural Entrepreneurs

It is a relatively recent phenomenon for leaders to set up their workshops in rural areas, employing neighboring villagers. These leaders can legitimately be called "rural entrepreneurs" because they introduced new ventures into agrarian societies.

The leaders in the garment sector are often women who worked for modern garment factories as line supervisors. Through this experience, they acquired the entrepreneurial skills of labor management in addition to sewing skills. Furthermore, they gained access to orders from modern garment factories; factory managers regard these leaders as qualified superintendents in the villages because of their previous experience as supervisors in the garment factories.

The garment leaders are from a poor social stratum, a landless class of the agricultural society that is the source of sewers in the modern industry. The weaving leaders, however, are from diverse strata of rural society. Some are from poor families, often widows, while others are the wives of village chiefs. It should be noted that four of the six weaving leaders studied had started their businesses in order to earn a living after their husbands passed away. Weaving entrepreneurship is, therefore, not an ascribed status, but it can be assumed that there are many potential entrepreneurs in the rural weaving sector. Their notable characteristic is that they themselves are skilled weavers who have inherited the traditional weaving culture.

Both categories of leaders employ neighboring villagers on their premises, subcontract work out to home workers, or use a combination of both techniques. The relationship between the leaders and the home workers is akin to a putting-out contract: the former advances raw materials to the latter on the condition that the home workers supply finished products.[6] As we have found, however, there are no underlying differences between the home workers and the workshop workers. In our cases, the demarcation between the putting-out and employment relationships is blurred. For convenience, we regard home workers as wage earners employed by the leaders.

Sewers and Weavers

The greater part of the sewers have prior experience in modern garment enterprises. After getting married, they returned to their villages and became sewers. In the early stages of industrialization, most of the workforce comes from agrarian communities. Female workers from such communities usually leave the factories in towns after marriage and return to their villages. The garment leaders, who are often returnees of the same kind, can thus hire an experienced workforce in rural areas. This life pattern of village women in northern Thailand can be accounted for by matrilateral bias in the kinship system and preference for matrilocal residence (Karim 1995).[7] It is safe to say that the modern garment factories create external economies by providing rural entrepreneurs (group leaders) and a skilled rural workforce (sewers).[8] Therefore, as more modern garment factories are established, the number of experienced returnees in rural areas will increase. A trait of the returnees is that their propen-

sity to migrate or to quit is very low. As a result, this labor market is highly segregated from the urban market and preserves the rural-urban wage differential.

Weavers, in contrast, are local; weaving is a skill traditionally acquired by village women in northern Thailand. Weaving is now on the decline because of the penetration of mass-produced, ready-made garments into rural areas and the emergence of alternative job opportunities in modern factories. The weaving leaders, especially near towns (for example, the case WA), are suffering from a shortage of weavers. Most weavers are in their forties to sixties, while most of the sewers are in their twenties and thirties. It appears that recruitment of weavers is becoming difficult.

Can Workers Be Entrepreneurs?

The economic and social differences between leaders and workers are generally small. But while being an entrepreneur is not an achieved status, in the case surveyed we could not find workers who had turned into leaders.[9] In other words, a master-apprentice relationship of the guild style does not exist in the garment and weaving workshops. This implies that leaders are distinguished from workers by something more than the level of their production skills.

What the leaders have—and the rural workers do not have—is access to an assured market for their products. In developing economies, where traditional values and practices coexist with modernity, transactions between the two different worlds need interpreters who are familiar with both worlds. The rural entrepreneurs can access and understand the information that links the villagers with the urban market, and they can interpret it for the villagers.[10] In contrast, the urban entrepreneurs, who are not familiar with the rules and norms of village communities, are faced with difficulties in communicating directly with individual village producers directly. This is where the rural entrepreneurs find their *raison d'être*. As we have observed, the leaders are individuals who have links with both urban contractors and village workers. With these links, a group leader can claim the title of rural entrepreneur.

Although most sewers and a number of weavers possess their own means of production, they are not independent, self-employed entrepreneurs; they are heavily dependent on the group leaders for procurement of raw materials and marketing of the products. As small producers living in remote areas, they are incapable of handling marketing issues at an individual level. To become entrepreneurs, individual rural workers must form a link with an urban business and develop an ability to manage villagers based on informal labor control. The ability to achieve these goals is not necessarily present in every villager.

Contractual Arrangements

Associations Between Leaders and Urban Businesses

The relational contracting system characterizes the association between leaders and urban businesses. We must note the sharp contrast between the garment and weaving sectors in

their contractual arrangements. The garment leaders rely on urban businesses for the procurement of fabrics, as well as the sale of the products produced through putting-out arrangements. The weaving leaders, however, rely on the wholesalers only for the sale of their products on advance-order arrangements. The weaving leaders usually purchase cotton yarn themselves in the market. Neither advances nor requests on the particulars of fabrics are common in the industry. Weaving wholesalers advance money only in the case of a bulk order.[11]

The reason for the heavy dependence of the garment leaders on urban businesses is that the leaders are not in a position to get information on the product market, such as designs, size, and kinds of fabrics, which largely determine product marketability. Advancing raw materials is indispensable in the garment sector because the materials provided suit the market demands urban businesses wish to satisfy. The weavers, in contrast, have a monopoly on the skill and local artistic designs that capture overseas markets and satisfy growing domestic demand for high-quality indigenous fabrics. This contrast makes clear the different functions of the relational contracting system in the two Thai textile industries.

The above discussion, however, does not refute the capital bottleneck thesis altogether as the explanation of the putting-out system introduced in the garment industry. As far as working capital is concerned, the garment leaders are confronted with difficulties. While material costs in the garment industry account for approximately 90 to 95 percent of the delivered price, in the weaving industry they account for 50 percent of the price for superior fabrics to 70 percent for inferior fabrics. In addition, garment leaders are relatively more impoverished than weaving leaders. It seems reasonable to suppose that a high constraint on working capital for the garment leaders forces them to rely on the putting-out system. When the putting-out system is adopted, working capital is not urgently required. The question of a fixed capital constraint will be taken up later.

All these things make it clear that rural household enterprises suffer from a disadvantage in marketing (see HYPOTHESIS 1, above), and that the relational contracting system is an effective device for overcoming the difficulties associated with marketing (see HYPOTHESIS 2). The putting-out system is thus a modification of relational transactions. The system is useful in industries where rural workshops have difficulty obtaining market information on their products.

The next question is why urban businesses decide to "buy" in the market, and not to "make" the products themselves. Before going into detail, we must clarify some differences between the urban garment and weaving businesses. The urban garment businesses are modern garment factories or merchant-manufacturers (for example, the case of GH) who also "make" their products. The urban businesses in the weaving industry, however, are wholesale merchants. Therefore, the make-or-buy issue in the weaving industry is paraphrased into the question of why the decentralized system is more prevalent than centralized handloom factories.[12] The reason for decentralized production in the weaving industry is simple. Skilled weavers are village women, mostly married, whose skills are region-specific. Little needs to be said about the difficulties of shepherding such weavers into centralized factories.

There remains the second question of why the modern garment factories in northern Thailand rely on the putting-out system. Although we did not collect much information on putting out by urban businesses, the manager of a large modern garment factory in Chiang Mai indicated that by putting out, they can reduce the risks associated with investment, including the enlargement of a factory, and they can reduce the cost of labor management. In modern factories, labor protection laws make dismissals difficult. The factory can achieve greater flexibility by dividing its workforce into core and peripheral groups. The rural industries are useful as buffers that absorb fluctuations. Therefore, the relationship between the urban principals and the rural workshops is symbiotic.

Nevertheless, the system has its drawbacks. According to one manager, it is difficult to complete production on schedule and to keep a close check on quality because most group leaders do not properly supervise their sewers. This is "the frictions inherent in putting out" observed by Landes in the phrase quoted earlier. To cope with these problems, the factory managers subcontract work out to villagers who previously worked in modern garment factories as supervisors. They transact in a recurrent fashion instead of in the spot market.[13] The stable and recurrent transactions encourage mutual trust between urban businesses and leaders (HYPOTHESIS 2). The trust avoids adverse selection and moral hazard problems to a considerable extent (Akerlof 1970), because trust works as "an important lubricant of a social system" (Arrow 1974).

Support for Rural Entrepreneurs

Rural workshops have spawned spontaneously without any exogenous support. At the same time, support from governmental and nongovernmental organizations has played an important role in bringing forth the rural entrepreneurs.

As discussed above, a working capital constraint for the rural textile industries is not critical as long as they rely on the relational contracting system, especially on putting-out arrangements. However, a constraint on fixed capital reveals differences. Garment leaders employ sewers who have their own sewing machines. In contrast, the weaving leaders have to lend looms for fabrics of double width without charge, since traditional handlooms are generally for fabrics of a single width. Therefore, the weaving leaders are faced with a fixed capital constraint. At the time they set up their businesses, weaving leaders often seek financial assistance from the Thai government to purchase the needed handlooms. Access to credit does not seem to be a problem—some leaders from a relatively poor stratum were provided credit without difficulty. Further expansion of a rural crediting service, sewing machines for the sewers, and handlooms for the leaders will be effective steps toward the formation of rural household enterprises.

Institutions stimulating latent rural entrepreneurial talent play another vital role. Several government agencies are in charge of craft support, including tax privileges from the Board of Investment, crediting service by the Small Industries Finance Office, and marketing promotion by the Thai Trade Center (Amara and others 1989). The Community Devel-

opment Department of the Ministry of the Interior assists the launching of group activities in rural areas (Thailand National Commission on Women's Affairs 1980).

Nongovernmental organizations also engage in the formation of rural enterprises. The efforts of the YMCA in the promotion of rural entrepreneurs afford a good example of this. The following information is based on an interview with a staff member of the YMCA in Sankampaeng. The YMCA started a Chiang Mai Homenet Project, a five-year experimental action research project, in 1990. The project assisted rural women in organizing and managing group activities. Major services and assistance provided by the project included group management, product quality improvement, product design development, marketing information, and working capital. A major problem for such groups is marketing, and the project has undertaken several activities to promote marketing:

- It organizes product fairs at least once a year. It also notifies its members about other trade fairs and advises them on the products they should prepare.
- The project coordinates overseas orders coming through the YMCA.
- The project publishes newsletters to inform its members about popular products and possible places to send their product samples.

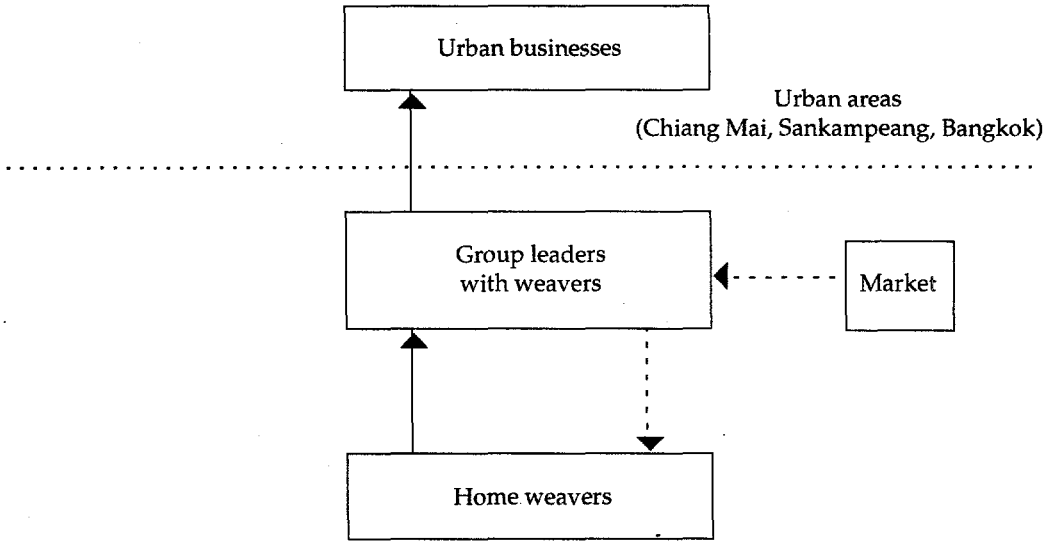
As a consequence, many groups have received orders directly from customers, and their products fetched favorable prices because the members do not have to pay a broker's fee. This assistance seems effective as a pump-priming policy in stimulating small rural entrepreneurs.

Associations Between Leaders and Workers

A salient feature of rural workshops is that the management hierarchy is shallow, even nonexistent. Instead, the mechanisms of community-based informal labor control are at work. Although direct evidence concerning the function of community labor control is, and is likely to remain, limited, its role should receive more attention in developing countries, especially when the modern factory system has not been effectively established (see HYPOTHESIS 2).

Informal labor control takes the form of either a peer group of socially homogenous members or a patron-client relationship in a simple hierarchy.[14] The two forms, however, are not mutually exclusive. They concurrently regulate the behavior of village workers in the rural workshops we surveyed. While in the garment workshops the control of the peer group predominates, in the weaving workshops that of a patron-client relationship prevails. This contrast can be explained by the different patterns of decisionmaking in the two industries. Compared with the simple hierarchy, the peer group is thought to be inefficient in both making and implementing decisions regarding work plans. In the garment workshops, however, decisionmaking is not crucial because the necessary information on production is provided by parent factories through putting-out arrangements. Therefore, the drawbacks of a peer group would not become an issue for the garment workshops. In the weaving workshops, however, the leaders have a monopoly on the skill and designs of

Figure 6-3. The Marketing Process in the Weaving Industry



Note: Solid and dotted lines denote the flows of finished products and raw materials (cotton yarn), respectively.

traditional fabrics and play a vital role in making decisions on the products to be woven. A boss-free organization, therefore, is not practical for weaving workshops. Accordingly, the relative predominance of the controlling modes is largely determined by the differences in production techniques.

It should be reemphasized that in the majority of cases studied, the social differences between leaders and workers are small. Strong ties of kinship and affinity—or at least friendship—exist among the members of the workshops, and they share common values and beliefs in village communities.[15] These relationships promote the formation of peer groups, especially in rural Thailand where the socially smoothing and conflict-avoiding value of *kreng jai* (care and consideration, as described further in Appendix 6-1) influences the villagers' attitudes and behavior.[16] Since the peer group works as a mutual monitoring system, effort-aversion leading to poor-quality output is largely prevented without further expense.

Another point to note is that the association between the leaders and the workers in the workshops is not simply a pecuniary nexus, but is one of the many associations linking them in the village community. Under such tightly woven village relationships, a breach of any association, such as ill behavior in the workshop, would easily lead to village ostracism. Fear of such censure strengthens informal control (Hayami and Kikuchi 1980).

It follows that in the rural workshops, extra-economic forces motivate villagers to work intensively and deters adverse selection and moral hazard. In large modern factories, in contrast, the moral reasons for hard work must be articulated.[17] Enforcing such impersonalized norms involves high transaction costs in an economy where trained manpower for supervision is deficient, and people have not become familiar with factory organizations. This tends to cause organizational dysfunction in modern factories in developing countries, which reveals a major advantage of the rural household enterprises over their large-scale counterparts (see HYPOTHESIS 1). It can thus be assumed that the prosperity of the rural industries in the early stages of industrialization partly reflects the limitations of early factory management.

The principle of "work and you will be rewarded" is strictly applied in the rural workshops, although in a mode different from that employed in modern factory organizations. In conclusion, the rural household industries have the advantage of low labor costs, a result of the dualism created by labor regulations, the cost of migration to the urban labor market, and the low monitoring costs of household work.

Conclusions and Policy Recommendations

It should be concluded that the rural household industries would have a great chance of development if their comparative advantage in labor management were fully utilized and their comparative disadvantage in marketing were covered by appropriate relations with urban businesses to assure recurrent transactions, including putting-out arrangements. The informal labor control in the village communities should be recognized as one of the most important resources that rural entrepreneurs can mobilize. Equally important is that the expansion of the relational contracting system into rural areas may enhance the market competitiveness of the modern garment sector.[18]

Based on the above discussion, the following steps may be recommended in a policy program designed to create and foster rural entrepreneurs.

1. *Establishment of modern garment factories in rural areas as a training ground for both garment leaders (rural entrepreneurs) and sewers.* Modern garment factories create external economies by providing rural entrepreneurs and a skilled workforce, and thus tax incentives may be offered to promote their introduction in rural areas.
2. *Furnishing information on product market to weaving entrepreneurs.* Although there are numerous latent weaving entrepreneurs in remote villages, their lack of marketing ability has forced them to remain small producers for local consumption. As our cases indicate, once they enter contractual relationships with urban businesses, they are able to expand their operations. Steps to assist this linkage should be taken. One possibility is to hold trade fairs to assist local producers in forming connections with the urban and overseas markets. Some of the weaving leaders we interviewed had linked with urban businesses through trade fairs sponsored by the government. Institutions, including nongovernmental organizations, that link latent rural entrepreneurs with the urban and overseas markets are effective in spawning rural entrepreneurs.

3. *Preservation of dual labor standards.* For a developing country, Thailand's labor laws are rather strict. The rural household enterprises, however, either stay outside the framework of the law or simply do not comply with it. This dualism enhances the market competitiveness of rural household enterprises. Therefore, this dualism should be preserved for the time being. Many of the rules in the labor law are inappropriate for workers in rural household industries. Loose application of labor laws will benefit the rural labor class through increased employment opportunities in expanded rural industries. Some developed countries are insisting that such dualism violates ILO (International Labor Organization) conventions and that implementation of core labor standards should be linked to access to world markets. It is mainly in the small-scale enterprises that there have been violations, and a convention on home-based workers was proposed by the ILO. Reactions of developing countries toward strict imposition of the ILO conventions have been strong. It should be noted that as far as the Thai garment industry is concerned, the dualism in legislation is not a direct cause of the trade friction. Garments destined for export are produced by large factories without the involvement of the putting-out system because of the necessity for quality control. Garments that are produced through the putting-out system are for domestic consumption and export to neighboring countries that do not require the high standards that other exports demand. Accordingly, our standpoint is that the dualism in legislation should be preserved for a time so that the diffusion of industrial and commercial activities over rural areas can be achieved.
4. *Supply of cheap production tools.* Sewing machines and handlooms are the main fixed capital of the two household industries examined in this study. Roughly speaking, two types of sewing machines were in use: manual machines and high-performance electric machines. The difference between them accounts for the levels of labor productivity, and hence for the wages the sewers receive. In addition, the possession of a sewing machine is a prerequisite to becoming a member of a sewing group. One can say that an ample supply of cheap, high-performance sewing machines and the formation of a secondhand market for these machines will facilitate the emergence of garment groups. A credit service for individual sewers, not for the garment leaders, to enable them to purchase sewing machines is another recommended policy. Our study demonstrates that the role of the Thai government in providing rural credit for the weaving leaders, not for the individual leaders, in installing handlooms assisted the growth of the weaving workshops. Expansion of a rural credit service will be an effective step in fostering the formation of weaving groups.
5. *Development of infrastructure and preservation of traditional weaving skills.* Development of transportation and communication networks is imperative for efficient marketing of village products. A majority of the leaders surveyed take orders by telephone, and some weaving leaders have created new product designs by adopting patterns in vogue that they had seen in fashion journals or on television. Because home weaving is on the decline in rural areas as a result of the penetration of ready-made garments, the weaving craft must be encouraged and taught to the younger generation.

Appendix 6-1. Workshops and Sewers in the Garment Industry

GA, home sewer 1 in a village near Sankampaeng.

Mrs. GA, in her late twenties, with two children, migrated from Bangkok to the village of her husband after marriage. In Bangkok she worked for a modern garment factory (more than 200 workers) for six years. Last year she bought a used electric sewing machine (9,000 baht) and a used hem-stitch sewing machine (2,500 baht) and entered into a contractual relationship with a leader from an adjoining village.

Mrs. GA gets batches of 200 pieces of precut fabrics for shirts and sewing thread on a five-day cycle. Although she sometimes fails to meet deadlines, no explicit penalties are imposed. After handing over finished garments to her leader, she gets another batch of materials. She sews only a part of the garment and is paid 2.5 baht per unit. She works an average of twenty days a month, and her monthly income is 2,000 baht, or 100 baht each working day. In 1993 the legal daily minimum wage in Chiang Mai Province was set at 101 baht, and 93 baht in Lamphun Province. Home sewing thus brings in a sizable income for a housewife.

Mrs. GA's leader employs fifteen workshop sewers at her premises and subcontracts work out to home sewers. The leader, in turn, acts as a subcontractor for a modern garment factory in Chiang Mai. When the leader cannot complete contracted work at her workshop before a deadline, she asks Mrs. GA to do a different type of sewing. Although this pays 5 baht for each piece, only ten pieces can be finished in a day (50 baht per day). When asked why she does not turn down this work, her answer was "*kreng jai.*"[19] *Kreng jai* denotes caring and consideration. It is often regarded as a Thai value essential for smoothing and maintaining good social relations (Suntree 1990). It can also be viewed as a social obligation toward others.

GB, home sewer 2 in a village near Sankampaeng.

After marriage, Mrs. GB quit a garment factory where she had worked for ten years. She is in her early thirties, with two children. She bought a manual sewing machine and started to receive putting-out work some years ago. Her leader subcontracts work out to twenty home sewers and employs five workshop sewers on her premises. A month before the interview, Mrs. GB bought a used electric sewing machine for 8,000 baht. She estimates that with the new machine she can sew about 20 percent more than with the manual machine.

Her leader supplies precut fabrics, but Mrs. GB has to buy the sewing thread herself in the market. Her contracted work has to be finished on a two- or three-day cycle. No bonus is given for keeping the appointed date of delivery. She makes complete shirts and receives 2.5 to 4 baht for each unit. On average, she earns about 100 baht a day, although she has to work long hours. Her products are for domestic consumption only because of their poor quality.

GC, leader 1 in a village near the town of Sankampaeng.

Mrs. GC, in her early thirties, is the wife of a carpenter. She receives orders from a trader, Mrs. Z, in the town of Sankampaeng, who is supplied with fabrics and designs by a whole-

saler in Bangkok. Mrs. Z cuts the fabrics and distributes them to her subcontractors. The products are exported mainly to the Middle East.

According to Mrs. GC, she happened to meet Mrs. Z and became her subcontractor, bringing together twelve neighbors with manual sewing machines (3,000 baht each) to work for her. Mrs. GC herself does not sew but engages in quality control and brokerage. The sewers are all married, in their thirties or forties, and from a poor social stratum of the village. Their husbands are either carpenters or construction workers. In the beginning the sewers installed their own sewing machines at Mrs. GC's premises, but now all are home sewers because working at home is more convenient for allocating time between sewing and household chores. Mrs. GC now controls eight sewers, since four left her to work at a new ceramic factory near the village. The factory pays 50 to 60 baht a day, but provides guaranteed work throughout the year (1,250–1,500 baht monthly).

Mrs. Z assigns a shirt to Mrs. GC to sew for 4 baht, and Mrs. GC pays her home sewers 2.5 baht per shirt. Mrs. GC supplies her home sewers with sewing thread at no cost and allows them to use her hem-stitch sewing machine (6,500 baht) without charge. The proportion of defective products sent back from Mrs. Z is about 2 percent. Mrs. GC asks her home sewers to resew them. When resewing is impossible, although this is quite rare, the sewers have to buy the shirt back for 60 baht, which is the cost of the fabric.

On average, leader GC receives orders for 2,000 to 3,000 shirts monthly and distributes work to her home sewers according to their requests. One of her most important roles is filling orders and handling the sewers' requests. To this end, she must stay on good terms with her home sewers; in other words, she must evoke *kreng jai* to coordinate the distribution of work smoothly.

An average sewer completes twenty to thirty shirts a day. This brings in 50 to 75 baht daily, or 625 to 920 baht a month (2,000–3,000 shirts/eight sewers). The wage rate is significantly lower than those in the cases of GA and GB, mainly because the sewers of GC use manual sewing machines in contrast to the electric machines used in the cases of GA and GB. The net earnings of leader GC amount to 3,000 to 4,000 baht a month, which is almost equal to the salary of blue-collar workers in modern garment factories in the area. The orders from the urban trader, Mrs. Z, involve only four types of designs. Although Mrs. GC wants more orders, she is unwilling to deal with other urban traders. This is because her sewers are disinclined to master different sewing patterns.

During the periods of peak agricultural activity (May to July), the daily wage rate for agricultural laborers rises to 80 baht. Because many sewers want to work as agricultural laborers during this season, Mrs. GC has to take smaller orders during this period.

GD, leader 2 in a village near Sankampaeng.

Mrs. GD, in her late thirties, is the wife of a driver and worked as a supervisor in a modern garment factory in Chiang Mai for sixteen years. Mrs. GD takes putting-out orders from large garment factories. Fabrics supplied by the factories are cut by her elder sister according to designs specified by the factories. The sewers are paid two baht per product, and the leader receives four baht when each is delivered to the factory. The costs of the sewing

thread, a hem-stitch sewing machine, and electricity are borne by the leader. An average sewer completes thirty pieces daily. This brings her daily wage to 60 baht, which is almost equal to the agricultural wage rate in the surrounding villages.

Mrs. GD employs six workshop sewers and three home sewers. According to her, there are no differences between the two groups. Some sewers gather at the leader's premises partly because they can use Mrs. GD's hem-stitch machine and partly because they just enjoy working with friends. The sewers have their own manual sewing machines (3,000 baht). All had worked for large garment factories until marriage. Mrs. GD engages in quality checks, sewing, and buttonholing. The work hours in the workshop are from 8 a.m. to 5 p.m., although sometimes they are extended to 9 p.m. in order to meet a delivery date set by her urban business.

Mrs. GD stated that it was critical for this kind of business to obtain stable orders, or sewers would leave for higher wages. She subcontracts work out to some subleaders on a short-order basis—for example, 200 pieces in two days. The subleaders are former employees of the workshop. When the subleader fails to finish the assigned work, Mrs. GD withdraws the work. She tries to allocate constant work to subleaders who do a neat job and meet deadlines. This policy acts as an enforcement mechanism that deters the opportunistic behavior of the subleaders, which is shown in the next case.

GE, leader 3, a subleader of GD.

Mrs. GE in her late twenties, the wife of a carpenter, and used to work for leader 2 (GD). She quit the work when her child was born and became a subcontractor of Mrs. GD. She employs five neighbors, who have their own manual sewing machines (3,000 baht each). They are all married and have working experience as sewers in modern garment factories. All the sewers work together at the leader's premises, bringing their machines. Mrs. GE has a hem-stitch sewing machine that all the sewers can use without charge. Although precut fabrics are supplied by Mrs. GD, the cost of the sewing thread is borne by Mrs. GE. The sewers are paid three baht per product. An average sewer completes ten sets a day. This activity provides a significantly lower wage than those paid in the other cases described here.

The leader, Mrs. GD, sometimes speeds up the work, threatening to supply fewer orders if the sewers do not do satisfactory work. When many orders come in, all the sewers have to work until 9 or 10 p.m. to meet the delivery date. Peer pressure seems to force them to work intensively.

GF, leader 4, a married couple in a village near the Industrial Estate in Lamphun.

Mr. GF, age thirty-one, is from Bangkok and was a dealer of machine parts. His wife, age twenty-four, worked for a modern garment factory in the industrial estate as a line supervisor for four years. She quit after having a child. They have high-performance electric sewing machines (13,000 baht each) and a hem-stitch machine (20,000 baht).

Mrs. GF sews and checks the quality of the products, and Mr. GF cuts fabrics with his cutting machine (2,000 baht). They take orders for factory uniforms exclusively from the factories in the industrial estates.

At present they employ twelve home sewers, all married, in their thirties, and with experience as sewers in modern garment factories. Three of them once served under Mrs. GF in the garment factory. The electric sewing machines are lent out to the home sewers without charge. When asked why the sewers do not work at the leader's premises, Mr. GF replied that if he employed more than ten workers at the workshop, he would have to register his business and would be charged corporate taxes.[20]

An average sewer can complete ten uniforms a day with a high-performance sewing machine, but the resewing rate because of poor quality is about 20 percent. With an ordinary electric sewing machine, only two or three pieces can be finished a day, Mr. GF stated. A sewer receives 20 to 25 baht per piece, a daily wage of 160 to 200 baht, taking into account the resewing rate. Although this wage rate is quite high, Mr. GF stated that it was necessary to hire skilled sewers for the high-performance sewing machines. Sewers who produce poor work are subject to dismissal. By the time of our interview, three sewers had been replaced.

Mr. and Mrs. GF have no intention of expanding their operations because it would become difficult to check quality and to manage sewers. When the number of orders is beyond their capacity, they sell orders to other garment workshops.

GG, leader 4 in a village near Sankampaeng.

Mrs. GG, age fifty, worked for a modern garment factory in Sankampaeng for twenty years. She left the factory seven years ago and started her own business with her twenty-seven-year-old daughter.

They installed three high-performance electric sewing machines (16,000 baht each). In addition, nine sewing machines have been borrowed from a garment factory in Chiang Mai for which they do subcontract work. They have several sources of orders: two modern garment factories in Chiang Mai and Sankampaeng, a five-star hotel in Chiang Mai that requires evening gowns, and a school that needs uniforms. Mrs. GG secured those contracts through her personal network.

There are two workshop sewers and seven home sewers, all of whom have work experience in modern garment factories. They are all married and in their thirties. Although there are no differences in wages between the two groups, Mrs. GG tries to assign constant work to the sewers working at her workshop as much as possible.

The leader organizes the sewers along an assembly-line process. Each worker sews a small component of the whole. Mrs. GG engages in quality checks and sewing as well. When asked whether it was difficult to regulate the flow of components from each sewer so that they would reach the final assembly point smoothly, Mrs. GG stated that she found little difficulty, partly because she had experience as a line supervisor in a large factory and partly because there was a small number of workers.

GH, an export-oriented merchant-manufacturer in the town of Sankampaeng.

A married couple in their sixties, who used to run a small retail shop, started their garment-manufacturing business after they were connected in business ten years ago with a Bangkok-based export agency. Fabric and designs are supplied by the agency.

Their products are exclusively for export, mainly to the Japanese market, which requires high-quality products. In the beginning, the products were often rejected when the work was not satisfactory. The rejected garments were sold in Chiang Mai and fetched a higher price than when exported. Exports, however, promise a more constant return than domestic sales because the local market is too small for continuous sale of the products. Since they tightened quality controls, few products have been rejected.

They have a workshop and employ twenty sewers there. Most of the workers are local married women. The owners now have to rely on seasonal workers from remote areas, because increased job opportunities with higher wages in modern factories make it difficult to recruit sewers in and around Sankampaeng. Five single women are seasonal workers from remote villages who stay in rooms provided by the owner at no cost. During the peak agricultural season, they return to their home villages to assist with agricultural work.

Large orders are subcontracted out to home sewers nearby. These sewers are former employees, and thus are skilled and trustworthy. According to the owners, the sewers used to rely on the owners for work, and the threat of being laid off could be used to enforce higher work performance. Nowadays the owners have to resort to other means of persuasion because of the increasing alternative job opportunities in and around the town. The home sewers sometimes do not comply with the requests of the owners, who found managing sewers a source of anxiety and deplored the lack of loyalty of the sewers. "It's a headache," Mrs. GH said twice.

The assembly process is split into several parts, and each sewer engages in only one part so that the owners can monitor the quality of the work. For workers who do not have sewing machines, the owners either lend a machine without charge or assign them embroidery tasks. The owners do not contemplate expanding their business because of a lack of capital and the possible difficulties in managing a larger number of workers.

Appendix 6-2. Workshops and Workers in the Weaving Industry

WA, Workshop A, in a village located in a food-processing zone.

Mrs. WA, in her late fifties, started her weaving business three years ago after her husband passed away. She borrowed seven handlooms through a government agency that assists rural women. She employs five workshop weavers and two home weavers. Fabrics are made based on the orders of neighbors. The quality is relatively poor.

Mrs. WA is a skilled weaver from Lamphun Province, where traditional weaving has flourished. In her present area, however, weaving has not traditionally been practiced

because the people enjoy good job opportunities in the food-processing industry. Therefore, Mrs. WA has to teach her workers how to weave. Wages are paid on a piece rate, 50 to 55 baht per meter. On average, workers weave two to four meters a day, which brings the weaver 100 to 200 baht daily. Their wages are significantly higher than those for agricultural laborers and factory workers because of the scarcity of weavers in the area. Mrs. WA is finding it difficult to run her business because the flow of orders is not secure.

WB, Workshop B near Sankampaeng, producing low-quality fabrics.

Mrs. WB, in her early fifties, started her business twenty years ago after her husband died. Since then, she has formed links with three wholesalers, two in Bangkok and one in Chiang Mai. The workshop produces fabrics of inferior quality for curtains, bedspreads, and luncheon mats. Mrs. WB accepts orders only for selected fabrics of varying designs and textures traditional in the area. There are three workshop weavers and twelve home weavers who have their own looms. In addition, ten workers are engaged in preloom activities. All are older women, of whom the youngest is forty years old.

In the case of a bulk order, Mrs. WB will receive a cash advance equivalent to around 40 percent of the delivery price. When working capital is in short supply, she buys the cotton yarn on credit from a yarn merchant.

The cost of materials accounts for approximately 70 percent of the wholesale price, and wages account for 25 percent (15 percent for weavers and 10 percent for workers engaged in preloom activities). The remaining 5 percent is the profit margin for the leader. Mrs. WB's profit margin sometimes disappears when the price of cotton thread rises.

Wages are paid on a piece rate. Although different fabrics have different rates, the average weaver earns 80 to 90 baht a day. Mrs. WB offers some incentive wages, such as a bonus, to enhance weavers' work performance, but her workers have not responded positively. The availability of weavers is another problem in the area, because the village is on the outskirts of Sankampaeng, where younger people have job opportunities with better working conditions. As a consequence, the workforce is aging, and with the passing of the present generation, this kind of workshop, as well as workshop A, will certainly decline, if not die out altogether.

WC, Workshop C in a remote village.

Mrs. WC, sixty-five years old, the wife of a village chief, lives in a village about 20 kilometers from Chiang Mai. She began her weaving business ten years ago with five handlooms. Her products are average in quality.

At the outset, the products were sold in town markets. For the past five years, she has had constant orders from a wholesaler/exporter in Sankampaeng. This led to the expansion of her business; she now has fifty-five handlooms. The purchase of these handlooms (3,000 baht each) was financed by government assistance. Mrs. WC installed nine looms in her house. The remaining looms are loaned to the home weavers in the village. Although

some villagers have their own looms, they are indigenous looms for fabrics of single width, which do not have a large market. Handlooms last about thirty years, and depreciation is thus negligible. Therefore, as a rule, no rental charge is levied. Whether a weaver works at the workshop makes no difference to the owner, but the space she can provide for installing handlooms at her premises is limited. The wholesaler sometimes offers suggestions on color and quality of cotton yarn for the products, but no advances are given.

Although the workshop is open from 8 a.m. into the evening, there is no strict rule about working hours. When we visited, there were five weavers at work, and some were taking naps on a bench. Because the owner usually stays in her room, no strict supervision is exercised. Stopping and chatting seem to be common practices in this workshop. The work discipline required in modern factories is irrelevant in rural workshops.

Wages are paid on a piece rate. In other cases, except workshop F, a piece rate is usually based on the length of the fabrics woven. In this workshop, the workload is measured in the gross of thread bobbins used in the production process. This is because a piece rate based on the length of fabrics woven with loose supervision offers opportunities for the weavers to indulge in reducing the number of picks of weft yarn, which results in inferior production quality. Workers are paid 600 baht when they have woven 6 kilograms of woof and 4.5 kilograms of weft into fabrics, which usually takes ten days. The daily wage rate is thus about 60 baht, which is almost equal to the agricultural wage rate in the area.

Workshop C can be characterized as having loose supervision, since the owner is too old to supervise intensively. Nevertheless, the problems of adverse selection and moral hazard seldom occur. There may be two main reasons for this: (1) there are few alternative job opportunities in this remote area for women in their forties and fifties; therefore, losing a job in the workshop immediately leads to joblessness for life; and (2) as discussed in the text, community relationships are likely to function as an implicit supervisor. These conditions deter opportunistic behavior by workers. In addition, because product quality need not be superior, strict supervision is not necessarily required.

WD, Workshop D in a remote village.

Mrs. WD lives in a village 60 kilometers from Chiang Mai. She is sixty-six years old and still active. After her husband passed away ten years ago, she started the weaving business with two handlooms.

She established business relationships with an export agency in Bangkok after she submitted her products to an exhibition sponsored by the government. Thereafter, her operation expanded, and now she has twenty-one handlooms at her workshop. She employs twenty-one workshop weavers and seventeen workers for preloom activities. In addition, some forty home weavers used to work in her shop.

Only in the case of a bulk order will the wholesaler advance money, up to 30 to 50 percent of the delivery price. Mrs. WD would like to have business relationships with other traders, but she thinks it will be impossible for her to contact them by herself. She feels that all she can do is wait until an export agency approaches her. At present, overseas

sales account for half the gross returns of the workshop. High-quality fabrics with intricate designs are for export; plain, coarse fabrics are for the domestic market.

One of the distinct characteristics of Workshop D is that the leader makes frequent inspection visits to the floor. While the weavers are paid on a piece-rate basis, the workers for the preloom activities are paid on a time-rate basis, 45 to 50 baht a day. It must be noted that a time-rate wage system is made possible because of the intensive supervision of the owner. Working hours are fixed, from 8 a.m. to 5 p.m. for preloom workers, while the hours of the weavers are rather flexible.

Although the designs of the fabrics are generally from the traditional patterns of the area, the owner creates new designs for fabrics by adapting patterns from a fashion journal and television programs. She teaches her weavers how to weave the new patterns. Her daughter, forty-eight years old, takes care of a retail shop that Mrs. WD set up in the town of Chiang Mai.

The most crucial problem this workshop faces, according to Mrs. WD, is the decline of home weaving prompted by the penetration of mass-produced, ready-made garments into rural areas. Since the younger generation has not woven at home, weavers need to be trained to acquire the necessary skill before employment.

WE, Workshop E in an area famous for traditional home weaving.

Mrs. WE, the wife of a village chief, lives in a village 30 kilometers from Chiang Mai. She started her weaving business twenty years ago with fifteen handlooms. At the outset, she sold her products to a wholesaler in Chiang Mai. Her sales picked up considerably when she formed a link with a Japanese export agency five years ago. This connection was established when she submitted her products to an exhibition sponsored by the government. Now 60 percent of her production is sold to the export agency. She currently employs 35 workshop weavers and controls 105 home weavers.

At the beginning of business dealings with the agency, the proportion of the products rejected because of deficiencies was 20 percent. This problem was overcome by hiring three workers, relatives of Mrs. WE, to check the quality of the products carefully. Their wages, in addition to those of the workers for the preweaving activities, are paid on a time rate, 100 baht daily. Working hours are fixed, from 8:30 a.m. to 5 p.m.

One of the notable features of this workshop lies in the distinction between workshop weavers and home weavers. While the home weavers are assigned fabrics with general designs, workshop weavers are assigned fabrics with designs that are specific to the workshop. Because of this, the wage rate of the workshop weavers is higher by about 15 percent than that of the home weavers. In order to keep the weaving technique secret, strangers are not permitted on the work floor.

Mrs. WE finds it difficult to meet the delivery dates of the wholesaler. She gives bonuses to home weavers who meet deadlines, and to strengthen the commitment of the weavers to her workshop, she reiterates "if you are good enough to work for my workshop when it is busy, you will have work when it goes slack," or "this work is important not only to the

workshop, but also to you." She recognizes that she must stay on good terms with her workers to obtain *kreng jai.*

WF, Workshop F producing superior varieties of fabrics.

Mrs. WF set up a small workshop thirty years ago, employing several weavers in a village 50 kilometers southwest of Chiang Mai, after her husband passed away. At the start there were handlooms for fabrics of a single width, and the products were rarely marketed. After ten years, Mrs. WF installed ten handlooms that she improved for fabrics of double width, 36 inches. In addition, she opened a shop in Chiang Mai for the sale of her products.

The workshop continues to use traditional methods, such as using cotton of traditional varieties, hand-spun yarn, and natural dyes made from plants instead of chemical dyes, to produce soft fabrics with delicate colors. Hand-spinning has practically disappeared in Thailand because of growing imports and the production of mill-spun yarn. In 1985 she was awarded the coveted National Artist Award.

When Mrs. WF died a few years ago, her daughter took over the business. There are now thirty handlooms, ranging from those with a single treadle to those with four treadles. The latter are for weaving quality fabrics with intricate designs.

No home weavers are employed by the workshop because it would be difficult to keep a close check on quality if work were subcontracted out. Time-rate wages are paid both to weavers and to workers performing preloom activities. Newly hired weavers have to serve a probation period of six months and are then promoted according to their weaving skills. Earnings from weaving activities among the individual weavers ranges from 55 to 150 baht a day, according to their abilities. The weavers are ranked in several classes of different abilities. There are twelve weavers ranked as superior, of which four enjoy the highest wages of 150 baht a day. This is significantly higher than the agricultural wage rates, 60 to 70 baht, in the area. Weavers who produce fabrics of inferior quality often are subject to demotion. Mrs. WF's daughter is the only supervisor in the workshop. She stated that a supervisory system relying on foremen, the practice in large factories, would not work. because the workers were not accustomed to supervising acquaintances, nor to being supervised by acquaintances from the same social group.

Working hours are from 8 a.m. to 5 p.m. Mrs. WF's daughter picks up the workers living in two villages by car. There are no holidays except for festival days, because the workers do not take days off. During the interview we often encountered stories that revealed a strong preference for work rather than leisure because of the low income levels in the rural areas.

Workshop F has features distinct from the other cases in that its products are renowned as high-quality, hand-woven fabrics of the traditional style. To keep the quality of its fabrics, the workshop has institutionalized systems that characterize the modern factory organization, such as time-rate wages and promotion. Nevertheless, labor management is still based on personalized control. It must be noted that the indigenous labor management of personalized control is not incompatible with the features of the modern factory system, such as a promotion and a time-rate wage system.

Notes

1. This is often asserted in discussion of proto-industrialization. See Mendels (1972).

2. On workers in rural textile industries, see Benja (forthcoming).

3. This is expressed best by Landes (1969). As far as "factory equals discipline cum supervision," for the first generation of factory workers from a traditional working milieu, "the factory is a new kind of prison; the clock of a new kind of jailer."

4. For definitions of types of contracts, see the chapter by Hayami in this volume.

5. On putting out in the garment industry in Bangkok, see Voravidh (1993).

6. Chapter 3 by Itoh and Tanimoto examines the relationship between leaders and home weavers in putting-out contracts in the Japanese weaving industry.

7. Matrilocal postnuptial residence among rural Thai women is common. See Apichat, Morgan, and Rindfuss (1986).

8. Note that this statement is only possible in economies where female factory workers return to their home villages after marriage. See Chapter 10 by Ohno and Kikuchi.

9. This shows a sharp contrast with the garment entrepreneurs in the Philippines (see Chapter 5 by Kikuchi).

10. For this statement, we rely heavily on Walter (1984).

11. Note that an advance in the weaving industry is made in cash, not raw materials.

12. Although a powered-loom weaving factory on a large scale is a plausible alternative, it is of no immediate relevance to discuss this industry because of product differentiation. Rural weavers produce either coarse or high-quality varieties such as twilled fabrics, while the powered-loom industry produces plain fabrics of medium quality. This habitat segregation was observed in India as well. See Yanagisawa (1993).

13. This phenomenon was analyzed in terms of clientelization by Geertz (1978).

14. On the mechanisms of the peer group, see Feldman (1984), Leibenstein (1987), Baron (1988), and Casson (1991).

15. This produces the high goal congruence among group members that is a crucial characteristic of clan organization. In clan organizations, the employment relationship becomes relatively efficient because monitoring of work performance is unnecessary (see Ouchi 1980).

16. It is pointed out that with the introduction of capitalism in Thailand, kin-based relations have been replaced by patron-client relationships (see Akin 1975). As far as our cases are concerned, however, kin-based relations are still predominant.

17. A list of factory regulations was posted on the wall of the plant of a large-scale weaving factory in Sankampaeng (Workshop B in Appendix 6-2). They said, "In the workshop, i) do not bring in drinks, ii) do not play games, iii) do not steal, iv) do not bring strangers into the workshop, v) follow the supervisors' instructions, vi) do not quarrel with your fellow workers, and vii) if you violate more than two of the regulations, you will be fired on the spot."

18. Landes insists that "it was this expansion into rural areas that made European and especially English industrial products competitive worldwide." He stresses the availability of the cheapest labor in rural areas as a main advantage of the putting-out system (Landes 1986). Note that our study insists that comparative advantage in the area of labor management based on informal control is another advantage of rural household enterprises.

19. This does not deny the possibility that Mrs. GA accepts the request to obtain more and continuous orders in the future.

20. His statement referred to the Social Security Act of July 1980. Establishments with more than twenty employees are now required to contribute to the Workers' Compensation Fund. In mid-1993 the act was extended to firms with ten or more employees.

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7

Township-Village Enterprises in the Garment Sector of China

Deqiang Liu and Keijiro Otsuka

Since the inception of economic reform in 1978, the Chinese economy has grown rapidly, with an average annual growth rate of about 9 percent. While the efficiency of the state sector as a whole improved during the reform process, a far more important contribution to industrial development came from the development of rural industry, widely known as township-village enterprises (TVEs). In their recent literature survey, Chen, Jefferson, and Singh (1992) conclude that TVEs have been a leading sector of the Chinese economy.[1] The production share of TVEs in the manufacturing sector increased from 9 percent in 1979 to 33 percent in 1993. Naughton (1992) argues that the entry of TVEs into industrial sectors has destroyed the monopolistic industrial structure dominated by state enterprises (SEs), thereby contributing to the overall efficiency of the economy.

TVEs are not necessarily new; some were established during the prereform period by people's communes or brigades to serve agricultural production and peasant life in rural areas. They were subject to regulation, including restrictions on the production of commodities produced by SEs. Those regulations, however, were relaxed over time, particularly after 1984 when the government announced policies to abolish unfair regulations against TVEs. Thus, TVEs have gradually entered into new markets to capture profitable business opportunities (Byrd and Lin 1990; Findlay and Watson 1992). TVEs tend to specialize in the production of labor-intensive commodities such as textiles and garments, where the performance of TVEs has far outweighed that of SEs because of the ample supply of labor in rural areas created by the restrictions on rural-to-urban migration (Otsuka, Liu, and Murakami 1998). These industries are labor intensive, for which China ought to have comparative advantages, but they were suppressed by the heavy-industry-oriented policies of the socialist regime. These observations suggest that one of the factors underly-

ing the success of rural industrialization in China has been the effective mobilization of the cheap labor force in rural areas.

TVEs, however, did not have good access to technological knowledge, management know-how, markets, and financial resources compared with SEs, particularly in the early stage of their development. Nonetheless, according to a production function analysis of the garment industry in China by Murakami, Liu, and Otsuka (1994), TVEs are more efficient than SEs, both technically and allocatively. How have TVEs acquired technical skill and management know-how and developed marketing channels? What sorts of individuals have played the role of entrepreneurs, introducing new knowledge, organizing the new industrial activities in rural areas, and coordinating marketing activities? This study extends the analysis of Murakami, Lui, and Otsuka by focusing clearly on the mechanisms by which TVEs have achieved rapid growth despite obvious handicaps.

Several different kinds of enterprises coexist in this industry, including TVEs, SEs, and joint ventures (JVs); JVs have been established mostly with firms from Hong Kong, China.[2] Furthermore, TVEs can be subclassified into ordinary or independent enterprises (ITVEs) and those managed in cooperation with SEs or state trading enterprises (STEs), which may be designated as CTVEs. ITVEs actively engage in subcontracts with SEs under piece-rate arrangements, in which the latter assign raw materials and sell the final products through their own marketing channels.[3] CTVEs and SEs or STEs maintain subcontracts through domestic cooperation, an institutional arrangement in which parent enterprises send managers and engineers to TVEs and share profits in accordance with their respective investment shares. CTVEs are also called "branch factories" of the parent enterprises.[4] JVs are similar to CTVEs in the manner in which profits and investment costs are shared with parent enterprises. Compared with CTVEs, however, the management of JVs is somewhat more independent from parent enterprises. Although both TVEs and SEs have established JVs, the former case is the focus in this study.[5]

An important question is why TVEs engage in various contractual and institutional arrangements with SEs, STEs, and foreign enterprises. In practice, the latter group provides technology and management know-how to the TVEs. The central process of garment production is sewing, which is technically simple and requires no complicated machine process.[6] The major management problem is the supervision of female workers, who usually work in groups of ten to twenty under a relay system of sewing operations. It is therefore doubtful that the provision of technology and know-how constitutes the major reason for the prevalence of subcontracts and the emergence of interenterprise cooperation. It seems more reasonable to postulate that it is essentially the development of stable markets for TVEs that has prompted the emergence of the contractual and institutional relationships. As Hayami argues in Chapter 1 of this volume, the development of rural industries must be supported by the network of commerce and other related services. This must be particularly true in China, where state sectors (state manufacturing enterprises, state trading enterprises, and state-run retailers) still dominate commerce and trading, and the private marketing sector is grossly underdeveloped, except in small retailing businesses in urban areas. We hypothesize that subcontracts and domestic cooperation are designed to utilize the traditional marketing channels controlled by the state sectors. We

also hypothesize that the establishment of JVs represents an attempt to circumvent the traditional marketing systems and to exploit new trading opportunities in export markets. While there is a possibility that the emergence of the potential threat represented by the entry of JVs is the reason that the monopolistic SEs sought subcontracts, the introduction of profit motives to the management of SEs seems to have been a more decisive factor in the establishment of CTVEs. Indeed, as will be shown later, CTVEs were generally established earlier than JVs.

Development of Rural Enterprises and the Garment Sector in China

Before proceeding to an analysis of garment enterprises based on our own survey data, it will be useful to characterize the importance of the garment sector in China's overall economy in the production and export shares it represents, as well as the importance of TVEs compared with SEs, by using official statistics. The official statistics on TVEs by industry group, however, are limited. According to the *China Statistical Yearbook* (State Statistical Bureau 1987, 1994), the total number of employees in the TVE sector as a whole increased from 28 million in 1978 to 51 million in 1992, while the real value of output increased twelvefold during the same period.[7] Disaggregated data by industry are available only after the mid-1980s.

Table 7-1 shows the nominal value of production by major industry, the production share in total production of the manufacturing sector, and the production share of TVEs in

Table 7-1. Value of Production, Production Share in Total Manufacturing Sector, and Share of Production of TVEs by Major Industry, 1986 and 1993

	1986			*1993*		
Industry	*Value of production (billion yen)*	*Production share (percent)*	*Share of TVEs (percent)*	*Value of production (billion yen)*	*Production share (percent)*	*Share of TVEs (percent)*
Metal products	33	3.5	36.1	191	4.3	56.8
Building materials	67	7.1	47.3	337	7.6	55.5
Garment	21	2.2	28.0	133	3.0	51.8
Textiles	125	13.1	18.5	416	9.4	41.9
Ordinary machinery	110	11.6	17.9	428	9.6	36.7
Food	77	8.0	15.4	299	6.7	35.2
Electric machinery	43	4.5	15.1	212	4.8	32.3
Chemical	67	7.0	10.1	274	6.2	28.4
Ferrous metals	67	7.1	5.5	433	9.7	17.7
Electronics and telecommunications	25	2.6	6.8	139	3.1	13.5
Transport equipment	36	3.7	6.8	273	6.2	13.1
Petroleum	30	3.1	0.0	150	3.4	6.3
Total manufacturing	953	100.0	17.6	4,441	100.0	32.8

Source: State Statistical Bureau (1987, 1994).

each industry in 1986 and 1993. Industries are arranged in descending order by the production share of TVEs in 1993. The production shares of TVEs were particularly large in the metal product, building material, garment, and textile industries. Note that metal products include machinery parts supplied from TVEs to SEs under subcontracts. It is clear that industries in which TVEs have large production shares are those that produce simple products with a large application of labor inputs. In contrast, the production shares of TVEs were low in ferrous metal, electronics and telecommunication, transport equipment, and petroleum. This group requires large capital investments and modern technologies. In other words, TVEs tend to specialize in the production of commodities that require intensive use of labor and extensive use of modern technologies. These are the industries that were given low priorities in the heavy-industry-oriented development strategies of the socialist regime, despite the comparative advantages China ought to possess in these industries given the abundance of unskilled labor. As Naughton (1992) argues, TVEs have entered underdeveloped industries where profitabilities were high.

Overall, the production share of TVEs has increased, and growth in the production share of TVEs was particularly impressive in the garment industry. It seems clear that the garment sector is one of the major industries in which TVEs have comparative advantage over SEs.

The comparative advantage of TVEs over SEs in the production of garment products can be more clearly seen in the export share (see table 7-2). As may be expected, major export items are products of light industries, including garments. Table 7-2 demonstrates that TVEs are highly export-oriented. The export shares for garment products are larger than the production share in garment industries, which ranged from 2.2 percent in 1986 to

Table 7-2. Value of Export, Share in Total Exports, and Share of Exports by TVEs by Major Commodity Group, 1988 and 1991

	1988			*1991*		
Export	*Value of export (billion yen)*	*Export share (percent)*	*Share of TVEs (percent)*	*Value of export (billion yen)*	*Export share (percent)*	*Share of TVEs (percent)*
Garment	6.1	4.3	49.6	12.7	5.6	77.5
Food	21.0	14.9	12.9	n.a.	n.a.	n.a.
Textile	26.2	18.6	16.4	42.8	19.0	25.0
Chemical	6.4	4.5	23.6	10.3	4.6	31.5
Machinery	6.9	4.9	16.2	15.9	7.0	23.8
Crafts and arts	9.7	6.9	39.0	15.7	7.0	52.0
Silk fabrics	6.1	4.3	21.4	10.1	4.5	33.7
Total export	140.7	100.0	19.1	225.6	100.0	29.7

n.a. Not available.

Source: Township and Village Enterprise Yearbook Editorial Board (1989, 1992).

3.0 percent in 1993. The ratio of exports to domestic production of garment products was about 20–25 percent in 1991–92. Thus, we may characterize the garment industry in China as a fast-growing industry because the development of TVEs is oriented toward exports.

Changing Organizational Structures of TVEs in the Garment Industry

TVEs have developed with particular vigor in the suburban areas of major cities in coastal areas. Although these areas are often within the jurisdiction of large cities, they used to be, and many still are, agriculturally based. It is therefore legitimate to call many of these areas rural. Furthermore, we will argue that such a concentration of TVEs is a consequence of the underdeveloped marketing sectors in China.

While private enterprises have flourished in some areas, such as Zhejiang Province, they are generally very small, with an average of four to five employees. They seem to engage primarily in small-scale service sectors, such as local commerce, transportation, and construction activities. In the manufacturing sectors, it is TVEs run by townships and village governments that have led to rapid rural industrialization.

In this study, we focus on TVEs located in the suburbs of Shanghai and Beijing where rural industrialization has successfully taken place.

Sampling Framework

Resurvey is an effective method to obtain accurate information and to correct erroneous responses, and we originally intended to resurvey the TVEs surveyed by Murakami, Liu, and Otsuka (1994) in 1990. They sampled thirty TVEs in Shanghai and twenty in Beijing. In order to compare the productivity performance of different kinds of enterprises, they randomly selected enterprises that produced, at least in part, men's shirts and women's blouses.[8] These two products are relatively easy to manufacture and are homogeneous from the viewpoint of the production process. Neither JVs nor CTVEs were intentionally selected. Therefore, their sampling is unbiased with respect to the selection of ITVEs, CTVEs, and JVs.

In this study, we had to drop nine of the originally sampled enterprises in Beijing and five in Shanghai because they did not reply to our inquiries. In order to restore a reasonable sample size in Beijing, we randomly added ten samples. Thus, our present study is based on sample data collected from twenty-five TVEs in Shanghai and twenty-one in Beijing. Since our sampling is not random in the rigorous sense of the word, the sample size is small, and only two locations were selected, the possibility of selection and other biases cannot be ruled out. At the same time, implementing field research in China is difficult, and thus very rare. Our research is expected to make a unique contribution to the understanding of the mechanisms of growth in TVEs.

We conducted a very informal survey in March and April 1994, which was followed by a formal survey carried out by local government authorities through a questionnaire we

prepared based on the informal survey. Questions addressed the years in which the enterprises, domestic cooperation, and joint ventures were established, and, most recently, the years 1990–93.

The number of sample enterprises in 1993 is shown by type in the last column of table 7-3. We did not distinguish between township- and village-run enterprises, because we did not observe any significant structural differences between them. Sixteen, or about one-third, of the sample enterprises were ITVEs; only nine were CTVEs. It must be noted, however, that seven CTVEs had established JVs with foreign enterprises between 1990 and 1993. Eight out of nine CTVEs were located in Shanghai. This large concentration of CTVEs reflects Shanghai's status as China's major traditional industrial center, and there are many SEs seeking cooperative management with TVEs. In contrast, Beijing is a newly industrializing area with relatively few existing SEs. The largest number of TVEs were found to be JVs in 1993. With respect to the relative distribution of JVs and ITVEs, there was no marked difference between Shanghai and Beijing.

Structural Evolution of Township-Village Enterprises

All kinds of TVEs were widely engaged in subcontracts with SEs and STEs under piece-rate arrangements. SEs are essentially integrated firms that carry out not only manufacturing but also marketing, which reflects the legacy of the socialist planning system in China. Under the socialist system, STEs were monopolistic traders that regulated imports of high-quality raw materials and exports of garment products. SEs and STEs have been close partners in international trade. SEs as well as STEs allocate raw materials to TVEs and sell finished garment products through their own marketing channels.

In contrast, we did not observe any subcontracting from TVEs to smaller production units, such as small workshops and rural households, which is often observed in other countries. Unlike many other countries, women in rural areas of China regularly work throughout the year, so that the utilization of women's time during agricultural off-seasons will not provide strong motivation for establishing subcontracts between TVEs and homeworkers. According to several TVE managers we interviewed, some TVEs had made subcontracts in the past for such activities as sewing on buttons and brushing off dirt, but stopped such subcontracting because of the difficulty of controlling the quality of work and enforcing the delivery date. We conjecture, however, that a more fundamental problem is the high marketing costs of securing raw materials and selling final products. In the absence of an efficient private trading network, TVEs must contact and negotiate directly with material suppliers and retailers, which is costly.

Before proceeding to an examination of the nature of the interenterprise contractual relationships and their economic significance, let us clarify two important characteristics of garment enterprises in rural China: the changing composition of enterprise categories over time and the large size of enterprises.

As the first column of table 7-3 shows, among the forty-six sample enterprises, only nine existed in 1975, and all of them were ITVEs. The number of TVEs increased gradually with

Table 7-3. Changes in the Number of Sample Enterprises by Type, 1975–93

Enterprise	*1975*	*1980*	*1985*	*1990*	*1993*
Independent (ITVEs)	9	24	30	27	16
Cooperation (CTVEs)	0	2	7	16	9
Joint ventures (JVs)[a]	0	0	1	3	21
			(1)	(3)	(7)
Total	9	26	38	46	46

a. Numbers in parentheses refer to the joint ventures between foreign enterprises and CTVEs, which are regarded as JVs.

Source: Authors' data.

the reform of the economy. It is important to observe that the number of ITVEs increased until 1985, but then declined in the late 1980s and early 1990s. In contrast, the number of CTVEs increased markedly in the late 1980s but declined from sixteen to nine for the three-year period from 1990 to 1993, because seven CTVEs had initiated joint ventures with TVEs, SEs, and foreign enterprises.

Why has the number of ITVEs and CTVEs declined since the mid-1980s and the early 1990s, respectively? According to table 7-4, the ITVEs in place in 1993 started operation, on average, in 1979, with seventy-two workers. Average size in the number of employees increased threefold, to 221, in 1993, but it was less than one-half that of CTVEs and JVs in the same year. They were also much smaller than others when the enterprises were established. These observations seem to indicate that enterprises that remained ITVEs tend to be less efficient—in production, in marketing, or in both—than the TVEs that have been reorganized as CTVEs and JVs. We will examine this point further when we analyze the production data.

Table 7-4. Average Year of Establishment of Enterprise, Domestic Cooperation, and Joint Ventures, and Changes in the Average Number of Employees by Type of Enterprise

	Average year established			*Average number of employees when established*			
Type (as of 1993)	*Enterprise*[a]	*Cooperation*	*Joint venture*	*Enterprise*[a]	*Cooperation*	*Joint venture*	*1993*
ITVEs	1979	n.a.	n.a.	72	n.a.	n.a.	221
CTVEs	1976	1986	n.a.	182	556	n.a.	534
JVs	1980	n.a.	1992	138	n.a.	402	463

n.a. Not applicable.

a. TVEs were all independent when established, except for five enterprises that launched operations as CTVEs.

Source: Authors' data.

The average CTVE in operation as of 1993 was established in 1976 as an ITVE; it initiated cooperation with SEs or STEs around 1986. During the period from 1976 to 1993, the number of employees increased threefold. The typical JV of 1993 was established around 1980 and became a JV very recently. The average size of the enterprises in this category also increased by a factor of three over the thirteen-year period. The size of not only ITVEs but also CTVEs and JVs roughly tripled from the year of establishment to 1993, which suggests that TVEs commonly seek to expand enterprise size.

According to our informal survey, a major advantage of JVs over CTVEs lies in the ease of obtaining export licenses under the preferential treatment JVs receive from the central government. Without such a license, CTVEs and ITVEs have to export products through STEs and pay commissions. It is thus distortionary government policies that provide a decisive advantage for JVs over other enterprises.

There are several possible advantages of CTVEs and JVs over ITVEs in the transfer of technology and management know-how, as well as the acquisition of financial and marketing assistance from urban enterprises. Transfer of technology and management know-how, however, do not seem to offer a strong justification for domestic and international cooperation, because subcontracts are also designed to transfer technology and to simplify management on the part of the subcontractor, or TVEs in our context. Furthermore, it is possible for TVEs to recruit engineers and managers from SEs, even though labor markets are imperfect. In principle, marketing constraints can also be also reduced by subcontracts. Yet subcontracts are essentially short-term contracts, subject to frequent changes. Marketing channels in China are institutionally limited because marketing is still dominated by monopolistic state manufacturing and trading enterprises, and it may well be that such long-term institutional arrangements as domestic and international cooperation have been devised in order to secure stable marketing channels. In the absence of an efficient marketing sector, an industrial structure that allows a small number of large enterprises to cooperate may be more efficient than an alternative structure in which a large number of small enterprises operate, even if the organizational costs of an enterprise increase more rapidly than its size. We are assuming here that given the total volume of market transactions, the total cost of transactions is lower when there are fewer enterprises, while the total cost of production tends to be lower when there is a larger number of enterprises. The optimum industrial structure clearly depends on how the costs of market transactions and production change with changes in the size and the number of enterprises. Without efficient market transactions, the interenterprise division of labor is difficult, so that the vertically integrated enterprise operation becomes advantageous, as argued by Hayami (see Chapter 1 of this volume).

In this connection, it is important to realize that the average size of garment enterprises is distinctly larger in China than in other countries. In our sample, the number of employees in each enterprise varies, generally between 200 and 600, but there are TVEs that employ more than 1,000. According to the chapters in this volume by Kikuchi (Chapter 5) and by Ohno and Jirapatpimol (Chapter 6), a size of fewer than ten employees is not uncommon in rural areas of the Philippines and Thailand, even though there are much larger

enterprises in large cities. These small enterprises are engaged in subcontracts with urban enterprises. In the case of China, subcontractors are large and do not create another layer of subcontracts with smaller enterprises. Furthermore, subcontractors are often subsidiaries of urban and foreign enterprises in China. These observations imply that the large size of enterprises and the prevalence of interenterprise cooperation are unique organizational features of rural industrialization in China. As such, they must be explained by factors unique to the Chinese economy.

There are several possible explanations for the prevalence of large enterprises among our samples. First, men's shirts and women's blouses are simple, standardized products, so that large-scale production has a certain advantage. Second, entrepreneurs in rural areas are scarce, so that the number of enterprises tends to be small. Third, the larger size of enterprises strengthens the bargaining position of TVEs compared with SEs and STEs. Fourth, given the preference for large enterprises of township and village governments, TVEs attempt to grow to gain favorable policy treatments. While we do not deny the importance of these factors, we believe that a more important reason for the large size of enterprises in China is the lack of an efficient marketing sector that can effectively organize small production units through market transactions.

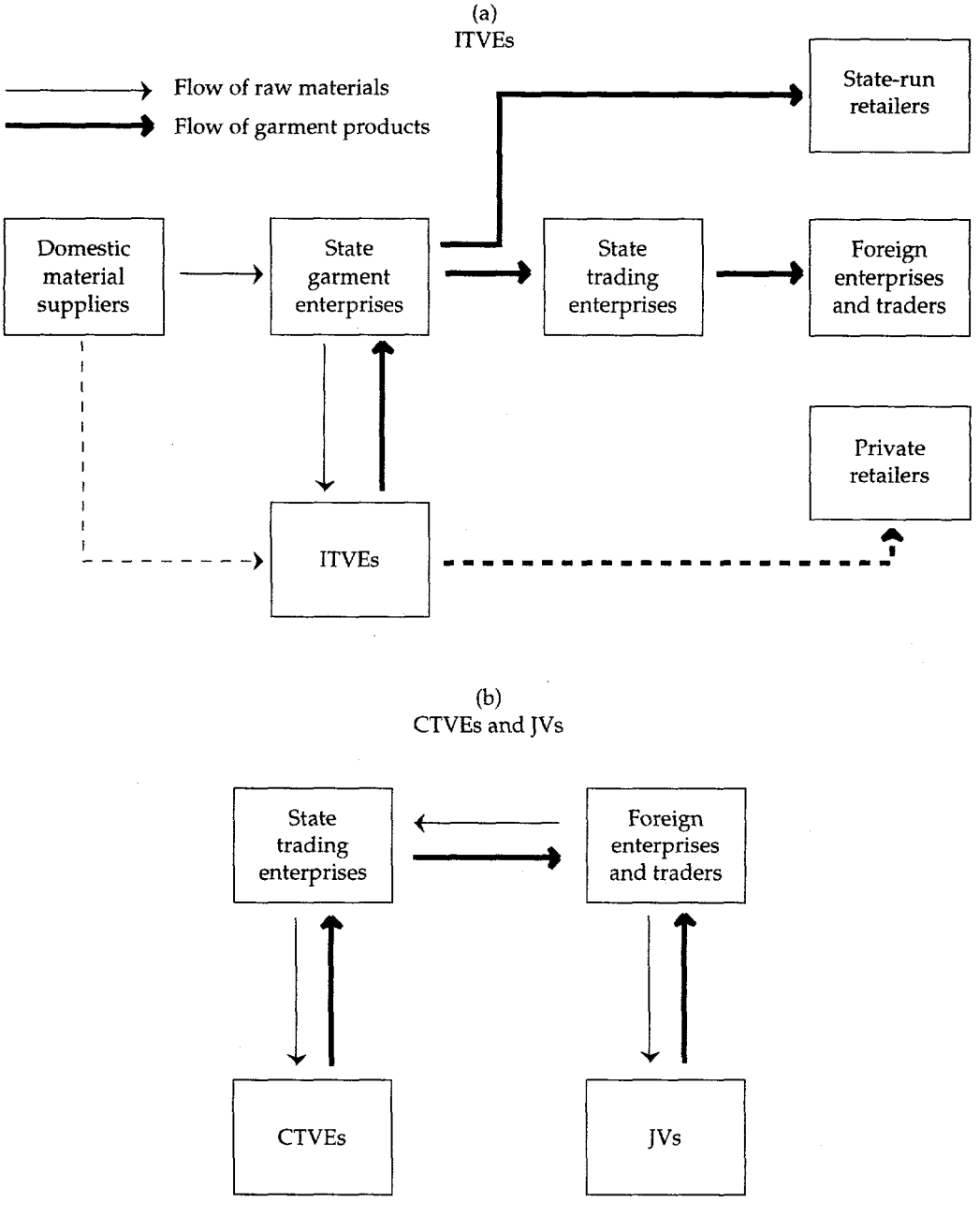
Contractual and Institutional Arrangements Between Enterprises

All of our sample TVEs are heavily dependent on SEs, STEs, or foreign enterprises in acquiring raw materials and selling garment products. Traditionally, SEs purchased inputs, such as cloth, directly from domestic weaving enterprises, and sold products to domestic markets through state-run retailers, including the SEs' own shops, and to foreign markets through STEs (see figure 7-1a).

New marketing channels have been developed and grafted onto this traditional marketing structure as TVEs have developed. Table 7-5 presents the relative importance of state garment, state trading, and foreign enterprises as partners in subcontracts, both at the time the TVEs were established and in 1993. Note that when established, most TVEs were ITVEs, but five TVEs started as CTVEs, so that the numbers in the first line under the heading "year of establishment" show average data of forty-one ITVEs and five CTVEs. It must be also pointed out that CTVEs and JVs were engaged in subcontracts with both parent and nonparent enterprises. Major partners of ITVEs, both in the year of enterprise establishment and in 1993, were SEs, followed by STEs. In terms of figure 7-1a, ITVEs acquired raw materials from SEs and delivered products to them under subcontracts, while relying on the traditional marketing channels of SEs.

The whole range of transactions by ITVEs, however, was not covered by subcontracts. ITVEs also acquired raw materials directly from both SEs and TVEs and engaged in self-marketing final products to newly emerging private retailers, as the dotted lines in figure 7-1a indicate. Given the lack of well-organized markets, however, such market transactions are bound to be costly. Furthermore, market transactions require large sums of work-

Figure 7-1. Major Marketing Channels of TVEs



ing capital because the purchase of raw materials occurs long before sale revenues are received. The requirement for working capital of TVEs can be lessened by subcontracts, because contractors purchase, or assist in the purchase of, raw materials.

CTVEs have subcontracts primarily with STEs, directly as well as indirectly through the mediation of SEs, for the purchase of high-quality foreign raw materials and the export of

Table 7-5. Major Partners in Subcontracts, Year of Enterprise Establishment and in 1993 (percent)

	State garment (SEs)	*State trading (STEs)*	*Foreign garment and trading enterprises*	*Other*
Year established	63	35	0	2
1993				
ITVEs	75	25	0	0
CTVEs	11	78	11	0
JVs	30	22	42	6

Source: Authors' data.

their products. Parent companies of CTVEs are SEs in four out of nine cases, and STEs in the other five. That STEs are also parent enterprises of CTVEs indicates that TVEs do not necessarily seek the acquisition of technology and management capacity through domestic cooperation and that the establishment of marketing channels is an important motive behind subcontracting as well as domestic cooperation. JVs carry out direct transactions with foreign enterprises and traders using export licenses (see figure 7-1b for their major marketing channels). Note that both CTVEs and JVs maintain subcontracts with SEs to some extent (see table 7-5).

Subcontracts

The subcontract is a piece-rate contract in which contractors (urban and foreign enterprises) either commit to purchase or to assign specific raw materials to subcontractors (TVEs); specify designs, and usually provide technical assistance; set delivery dates; and make piece-rate payments in exchange for products finished by a specified date.

In 1993 all types of TVEs were engaged in subcontracts with multiple enterprises (table 7-6); ITVEs appear to have relied greatly on subcontracts. The subcontract is essentially a short-term contract, which is often renewed after its successful completion. The average length of the most important contracts for ITVEs, however, was as long as 5.9 years, which was longer than the subcontracts made with other kinds of enterprises. It appears that

Table 7-6. Average Number of Subcontracts per TVE and Average Duration of the Most Important Subcontract, by Type of Enterprise in 1993

Enterprise	*Average number of subcontracts*	*Average duration of the most important subcontract (years)*
ITVEs	8.3	5.9
CTVEs	6.6	3.3
JVs	7.4	2.7
Average	7.5	3.9

Source: Authors' data.

ITVEs relied on subcontracts more heavily than CTVEs and JVs, both of which had secure, long-term trading partners under interenterprise cooperation.

Table 7-7 shows the mode of raw material transactions between ITVEs and contractors and between TVEs and their parent enterprises under domestic cooperation and joint ventures. In China, subcontracts with "free" provision of raw materials or putting-out contracts were not common, particularly for ITVEs; more common was the purchase of specified raw materials by TVEs from designated sources, with the purchase of products guaranteed in advance by the contractor, which may be called an advance-order contract. The main reason for the low incidence of putting-out contracts seems to be the weak financial position of SEs, which often run deficits. The free provision of raw materials in advance may also be risky for the principal if the agent is not trustworthy. In subcontracts between parent enterprise and TVEs, putting-out contracts were somewhat more common.[9] It may well be that cooperation and joint ventures were ways to save in the transaction costs of marketing by establishing reliable, long-term trade partnerships.

Piece rates are determined in advance, and the fees are usually paid with a single payment within a specified period after the delivery of finished products. In this arrangement, contractors attempt to make payments after receiving the final revenue from sales. This was the kind of arrangement made in more than 70 percent of cases; in the rest of the cases, small advance payments were made or bonus payments were added upon successful fulfillment of all contractual terms. Technical and/or financial assistance was provided in about 60 percent of cases when the initial subcontracts were made, but the importance of such assistance has declined over time.

The quality and quantity of final products are inspected by the contractors and by the parent enterprises. During the informal survey it was commonly reported by a large number of TVE managers and engineers that quality controls had been effectively enforced. According to them, the rate of returned products, which fail to meet quality standards, has been almost zero. Thus, quality shirking, which is considered a major problem of piece-rate contracts, seems to have been effectively prevented.[10] Other opportunistic behavior,

Table 7-7. Mode of Raw Material Transactions under Subcontracts at the Year of Enterprise Establishment and in 1993
(percent)

	Advance order contract[a]	*Advance order contract with partial payment*[b]	*Putting-out contract*[c]
Year established 1990–93	56	15	28
ITVEs	68	11	20
CTVEs with parent enterprise	55	5	40
JVs with parent enterprise	53	10	38

a. Purchase of designated or assigned materials by TVEs.
b. Purchase of assigned material with partial payment by TVEs.
c. Free provisions by parent enterprises and/or contractors.
Source: Authors' data.

Table 7-8. Family and Friend Ties and Other Prior Relations Leading to Establishment of Subcontracts, Domestic Cooperation, and Joint Ventures
(percent)

Relationship	*Family and friend ties*	*Prior sub-contracts*	*Other business relations*	*Intermediation by local government*
Subcontracts, year established	55	n.a.	30	15
Subcontracts, ITVEs, 1990–93	36	n.a.	61	2
Domestic cooperation	33	21	14	32
Joint venture	29	14	38	19

n.a. Not applicable.
Source: Authors' data.

such as concealed transfer of designated and assigned raw materials for other purposes, also seems uncommon.

A critical element in the effective enforcement of subcontracts is the prior experience of contractors in manufacturing the ordered products, so that experienced engineers have accurate knowledge of the appropriate positioning of cloth for cutting—and, hence, exact cloth requirements—and the expected quality of final products if the assigned tasks have been accomplished properly.

The threat of nonrenewal of current subcontracts and loss of social reputation seem to work against shirking and cheating, even though such activities were rarely reported. Competition among TVEs for subcontracts also seems to play a role in preventing opportunistic behavior. Some TVE managers informed us that if urgent jobs were requested, they would operate their factories day and night to obtain more jobs in the future.

A widely observed means of reducing the transaction costs associated with contractual relations and the internal management of firms in the less-developed countries is to use "F-connections," meaning ties with family and friends (Ben-Porath 1980; Hayami and Otsuka 1993). For example, managers of SEs may prefer to offer subcontracts to TVEs that employ relatives and close friends. Such personal or community ties were observed in 55 percent of subcontracts in the year of enterprise establishment (table 7-8). Over time, however, a variety of business relations become increasingly important as reasons to enter into contractual relations. As in the case of putting-out subcontracts in weaving in prewar Japan (Itoh and Tanimoto, Chapter 3 in this volume), community ties seem to have played a role in enforcing the terms of subcontracts in contemporary China.

Domestic Cooperation and Joint Ventures

As in the case of ITVEs, CTVEs rely on subcontracts. The major differences between the two lie in the large commitment of parent enterprises (SEs or STEs) to the management of TVEs. A written contract is exchanged that specifies the period of cooperation, appointment of managers and engineers, and investment and profit shares, among other things.[11]

The contract period in our sample is usually ten years. SEs often provide brand names and technology as a part of their investment requirements, in addition to funding and used machinery.

In order to enforce the terms of contracts effectively, a parent enterprise sends a manager as well as engineers to the subcontractor. On average, three engineers were sent in 1993. The manager is usually provided with a high salary, although he will be fired if malfeasance is found to be practiced or enterprise performance is unexpectedly low. By and large, the parent enterprise takes charge of production management and marketing, while leaving the responsibility of labor management to the CTVE. Therefore, it is pertinent to characterize the CTVE as a branch factory or a subsidiary of an SE or STE.

While SEs, STEs, and TVEs seek domestic cooperation, final decisions are often made by SEs and STEs because there are fewer SEs and STEs than TVEs, which gives greater bargaining power to the former. SEs and STEs look for partners in domestic cooperation to obtain profits, because their management is subject to a variety of regulations, such as lifelong employment, and thus their profit-seeking behavior is necessarily restricted. Successful subcontracts in the past, which indicate a high quality of work, sometimes led to domestic cooperation (see table 7-8). Local governments also assisted in the formation of CTVEs through intermediation. Since TVEs are ultimately owned by local governments and the policies of local governments influence the fate of TVEs, it must be that the support of CTVEs by local government provides incentives to establish new forms of production organizations in rural areas of China.

By far the most important reason for TVEs to establish domestic cooperation has been to improve market access (table 7-9). In contrast, technological, managerial, and financial reasons are of secondary importance. Since parent enterprises share profits, they have incentives to provide a stable flow of sewing jobs to CTVEs directly, as well as through the mediation of subcontracts between STEs and CTVEs (see table 7-5). In this way, the establishment of CTVEs is expected to contribute to stable market transactions.

Qualitatively, the contractual terms of JVs do not seem substantially different from those of CTVEs in investment and profit sharing, marketing arrangements, and production management. While there are cases in which parent enterprises send managers, it is more common for JVs to recruit managers locally. Like the parent enterprises of CTVEs, these

Table 7-9. Major Reasons for Establishing Domestic Cooperation and International Joint Ventures
(percent)

Item	*Access to markets*	*Access to export license*	*Preferential tax treatment*	*Improvement of technology*	*Improvement of management*	*Access to financial resources*
Domestic cooperation	68	n.a.	0	11	5	16
Joint venture	27	33	16	4	2	19

n.a. Not applicable.
Source: Authors' data.

Table 7-10. Distribution of After-Tax Profits and Investment Shares among Local Government, TVEs, and Parent Enterprises, 1993
(percent)

	Recipients of profits			*Investment shares*		
Enterprise	*Local government (A)*	*TVEs (B)*	*Total (A) + (B)*	*Parent enterprises*	*Local government and TVEs*	*Parent enterprises*
ITVEs	41	59	100	n.a.	100	n.a.
CTVEs	36	35	71	29	57	43
JVs	30	39	69	31	60	40

n.a. Not applicable.
Source: Authors' data.

parent enterprises sent engineers to JVs (an average of about three in 1993) to ensure the quality of garment products. While ties to family and friends, prior putting-out contracts, and intermediation by local governments seem to play some role in the establishment of JVs, other business relations, such as open market transactions of raw materials and garment products, were more important reasons for the initiation of JVs (table 7-8). According to table 7-9, the most important direct reason for the establishment of JVs was to obtain an export license; the second most important was improvement of market access. Export licenses are readily granted to JVs as a part of the central government's policy to promote JVs. Thus, the establishment of JVs leads to the development of efficient marketing channels for exports. To put it differently, the major objective of establishing JVs was to obtain export channels through direct partnerships with foreign enterprises, which was aided by preferential issuance of export licenses to JVs.[12]

The distribution of after-tax profit and investment shares among the local government, TVE, and parent enterprise is shown in table 7-10. Profits were distributed in roughly equal portions to local governments and TVEs in the cases of CTVEs and JVs. Parent enterprises received profit shares of about 30 percent in both cases. These profit shares were somewhat smaller than their investment shares, although we were told that profit sharing was proportional to the sharing of investment costs.[13] The discrepancy between the two may be explained by the larger contributions by TVEs to management than originally planned.

Marketing Channels and the Performance of Enterprises

Based on the preceding discussion, it seems reasonable to postulate that while both subcontracts and the two forms of interenterprise cooperation are designed to provide marketing channels for newly emerging TVEs, the cooperation provides more stable marketing channels. In the cooperation, the establishment of JVs seems to offer an advantage over CTVEs in access to export markets. If these hypotheses are valid, we expect to observe that

(1) reliance on self-marketing is highest for ITVEs; (2) greater resources are expended for marketing by ITVEs; and (3) the observed production performance (for example, value added per worker) tends to be lower for ITVEs and higher for JVs. In this section we will examine these points.

Changing Marketing Channels

In the survey we failed to obtain comprehensive data on the quantitative importance of various marketing channels in the acquisition of raw materials and sales of final products.[14] Table 7-11 summarizes the frequency of the most important marketing channels reported by our sample enterprises in the year of enterprise establishment and in 1993 by type of enterprise. For this reason, the reliance on SEs and STEs may be underreported to the extent that they did not provide the major marketing channels for TVEs.

When TVEs were established, they relied on self-purchase of raw materials in 40 percent of cases and on self-marketing output in 33 percent. Thus, subcontracts did not always cover a major part of TVEs' transactions. The importance of subcontracts is reflected in the frequency of transactions with state garment and trading enterprises. An important observation here is that ITVEs continued to depend considerably on the self-acquisition of raw materials and self-marketing of final products in 1993. If input and product markets are underdeveloped and imperfect in China, as they certainly have been, ITVEs must have faced serious marketing problems.

CTVEs acquired raw materials and sold final products almost exclusively through subcontracts with state garment and trading enterprises. This indicates that domestic cooperation reduced the need to rely on self-acquisition and self-marketing. JVs depended greatly on foreign enterprises in marketing activities, yet they also depended on SEs and STEs, partly because some SEs and STEs also joined the establishment of JVs. More fundamentally, JVs seem to seek diverse marketing channels to stabilize the flow of market transactions.

Larger resource expenditures by ITVEs for marketing activities are clearly indicated by table 7-12, which shows the number of specialized marketing personnel for each million

Table 7-11. Major Marketing Channels at the Year of Enterprise Establishment (YOE) and in 1993 by Type of Enterprise
(percent)

	Acquired raw materials				*Products marketing*			
	TVEs	*SEs*	*STEs*	*Foreign enterprises*	*TVEs*	*SEs*	*STEs*	*Foreign enterprises*
YOE	40	30	28	2	33	30	33	4
1993								
ITVEs	47	20	33	0	31	25	38	0
CTVEs	11	40	44	4	0	44	56	0
JVs	19	21	22	38	5	19	24	52

Source: Authors' data.

Table 7-12. Marketing Personnel per Million Yuan of Gross Revenue and Working Capital, 1993

Enterprise	*Marketing personnel/ million yen*	*Working capital (ratio to gross revenue)*			
		Total	*Self-supplied*	*Borrowed from banks*	*Supplied from parent enterprises*[a]
ITVEs	1.04	52	23	28	0
CTVEs	0.31	49	9	18	22
JVs	0.34	37	12	18	7

a. Estimated as residual.
Source: Authors' data.

yuan of sales revenue and the ratio of working capital to sales revenue. The following observations can be made. First, the ratio of marketing personnel is significantly higher for ITVEs than CTVEs and JVs. Second, although the total working capital requirement for each unit of sales revenue is roughly similar across the three kinds of enterprises, the proportion of self-financed working capital is much larger for ITVEs than for others. The difference between the total working capital and self-financed capital essentially corresponds to the portion of working capital financed by parent enterprises and bank loans. Third, consistent with the above interpretation, the ratio of working capital borrowed from banks to sales revenue is higher for ITVEs. These observations are consistent with our hypothesis that domestic cooperation and joint ventures provide stable and efficient market channels for TVEs, over and above those made possible by reliance on subcontracts alone.

Marketing and Productivity

The overall efficiency of enterprise management will depend not only on technological and managerial efficiency, but also on efficiency in marketing, insofar as the latter affects purchase of raw materials, outlets for final products, and the timeliness of these transactions. Table 7-13 compares basic enterprise performance in gross value of production, la-

Table 7-13. Comparison of Basic Performance by Type of Enterprise, 1993

Enterprise	*Gross value of production (million yen)*	*Labor productivity*[a] *(yen)*	*Capital-labor ratio*[b] *(yen)*	*Wage rate (yen/year)*	*Export ratio*[c] *(percent)*
ITVEs	11.5	6,919	4,968	3,019	42
CTVEs	21.8	7,831	3,651	3,705	88
JVs	31.9	10,365	4,776	3,671	75

a. Average value added per employee.
b. Average value of machinery per employee.
c. Value of export divided by gross value of production.
Source: Authors' data.

bor productivity, average yearly wage, capital-labor ratio, and export ratio. Wage payments are commonly made on a piece-rate basis.

The labor productivity of ITVEs was found to be the lowest, despite the highest capital-labor ratio, in 1993, indicating that the overall production efficiency was also lowest for ITVEs. Presumably reflecting such inefficiency, the wage rate was also lowest among ITVEs. That the ratio of exported products was also lowest among ITVEs indicates the low quality of their products, because export markets usually require high-quality products. Thus, it is clear that the overall efficiency of enterprise management was lowest for ITVEs. This result was anticipated, because ITVEs faced greater difficulties in marketing and received less technical and management assistance from SEs.

It is difficult to compare the relative efficiency of CTVEs and JVs. First, since both labor productivity and capital-labor ratios were lower for CTVEs, overall production efficiency cannot be compared without knowledge of production function parameters. Second, the seemingly good performance of JVs may be apparent more than real, because their access to export licenses may confer price advantages to JVs over CTVEs.

According to the estimation results of the production function by Murakami, Liu, and Otsuka (1994), the total factor productivity is 30 to 40 percent less for ITVEs and 25 to 8 percent less for CTVEs compared with JVs. The difference in productivity between CTVEs and JVs, however, is statistically insignificant. Thus, the statistical analysis does not indicate the critical importance of export licenses dictated by the restrictive export policy in China.

Characteristics of Rural Entrepreneurs

The next question we would like to explore is who rural entrepreneurs have been in the context of rural industrialization in China. Rural entrepreneurs facilitate the introduction of new technologies, new products, and new market opportunities to rural areas, and they exploit the availability of the cheap rural labor force. The use of the cheap rural labor force is of particular significance in China, because labor migration to large cities has been restricted, which has artificially accentuated the dual structure of labor markets.

Another important question is the mobility of factory managers and engineers from urban to rural enterprises. If rural enterprises can recruit managers and engineers from urban enterprises, they do not have to develop interenterprise cooperation and subcontracts to gain management know-how and technological knowledge. In that case, the establishment of marketing channels is likely to be a major reason for establishing domestic cooperation and joint ventures.

Characteristics of Managers

The major rural entrepreneurs in the development of TVEs can be identified as enterprise managers, who have clear and strong decisionmaking authority. Table 7-14 demonstrates

Table 7-14. Personal Characteristics and Mode of Appointment of Enterprise Managers, Year of Establishment (YOE) and 1993

	Previous occupation/employers (percent)[a]						*Appointed by (percent)*[c]	
	Farmer	*Local government*	*Parent enterprises*	*Other enterprises*[b]	*Average age*	*Proportion of high school graduates*	*Local government*	*Parent enterprises*
YOE	22	41	11	24	41	22	87	11
1993								
ITVEs	19	38	n.a.	44	44	50	94	n.a.
CTVEs	22	0	44	33	49	33	22	78
JVs	5	29	29	38	41	67	33	57

n.a. Not applicable.

a. There are a few cases classified as other categories.

b. Includes TVEs for which managers worked before.

c. There are a few cases classified as other methods of appointment.

Source: Authors' data.

the changing personal characteristics of TVE managers from the years of enterprise establishment (YOE) to the present, together with the changing mode of their appointment.

At the time TVEs were established, their managers were mostly farmers or from the local government cadres. With few exceptions, they have been males. In cases where TVEs were established as CTVEs, managers were sent from parent enterprises in the year of establishment. In the majority of cases, however, managers were rural-based and had little experience in factory management during the early stage of development. The decisionmaking authority on enterprise management often rested in local governments, particularly in negotiations with external agencies. Many, however, were replaced by individuals who had experience working in garment factories; that is, those who were recruited from parent and other enterprises. While the average age of managers did not change much between establishment and 1993, the ratio of those with high school educations or above significantly increased. Thus, it is clear that entrepreneurs in the garment industry now are more experienced in garment production and more educated than before. Over time they were given greater decisionmaking authority over internal management and larger claims on residual profits, whereas local governments gradually withdrew from internal management and assisted external management only occasionally (Chen and Rozelle 1995; Otsuka, Liu, and Murakami 1998).

A number of China experts argue that TVEs are unlikely to pursue profits rationally because of excessive intervention in enterprise management by local governments (see, for example, Byrd and Lin 1990). For example, it is said that TVEs are required to protect and promote the welfare of resident workers even at the sacrifice of profits. To support such a view, these experts often allude to the appointment of TVE managers by local governments without due consideration of their qualifications. The appointment process, however, has been changed significantly. It is true that 87 percent of the managers were appointed by local governments and 11 percent by parent enterprises when TVEs were

established. But the cases of appointment by local governments declined to 50 percent, on average, in 1993. It must also be pointed out that even though local governments have appointed managers in the 1990s, in practice, many of them simply approved managers nominated by TVEs. It is also interesting to note that most managers were appointed by parent enterprises under domestic cooperation and joint ventures in 1993. This implies that many of the current managers of CTVEs and JVs have the management abilities required by parent enterprises.

In short, given the increasing pressure of market competition among TVEs, highly qualified managers seem to have been selected in recent years.

Characteristics of Engineers

The characteristics of not only enterprise managers but also of engineers have changed over time. Engineers may not be major entrepreneurs, but they often assist managers in the introduction of new machinery, new designs, and new materials.

Table 7-15 compares the job experience and training of engineers between YOE and 1993. Note that we used multiple-choice questions among a group of engineers; thus, if even a single engineer had worked as a rural artisan, for example, the answer to the question of rural artisan as a previous occupation was yes for the group. According to this table, 31 percent of enterprises recruited rural artisans as engineers in YOE, whereas such cases became rare by 1993, except for ITVEs. The reliance on retired workers and the recruitment of engineers from other enterprises has been high for ITVEs, which indicates that ITVEs have acquired technical know-how through employment of experienced engineers. In contrast, engineers from the parent enterprises constituted the majority of engineers

Table 7-15. Major Characteristics of Engineers in Sample Enterprises, Year of Establishment (YOE) and 1993
(percent)

	Previous occupation/employers[a]				*Experience*		*Proportion of high school graduate*	*Average age*
Enterprise	*Rural artisan*	*Retired worker*	*Parent enterprises*	*Other enterprises*	*Vocational schooling*	*OJT*[b]		
YOE	31	52	11	46	21	93	36	31
1993								
ITVEs	25	56	n.a.	50	31	100	36	25
CTVEs	0	22	78	11	33	78	39	25
JVs	7	14	67	12	52	76	33	50

n.a. Not applicable.

Note: This table is based on the responses to questions to a group of engineers. Thus, for example, the answer is yes if there is even one engineer who has been rural artisan before.

a. There are a few cases classified as other categories.

b. On-the-job training.

Source: Authors' data.

in CTVEs and JVs. This last observation indicates that domestic cooperation and joint ventures facilitate technology transfer from parent enterprises to their subsidiaries.

Engineers now have received more formal training in vocational schools. In the case of ITVEs, they have learned through on-the-job-training within TVEs. There is no question that the technological base of TVEs has been strengthened through the employment of more qualified engineers.

Support Policies of Local Government

In addition to intermediation in business partnerships, local governments actively promote the development of TVEs through a variety of actions, such as the provision of infrastructure and guarantees for bank loans. While there is no denying that such policies contributed to the development of TVEs, it is difficult to establish causation because it is likely that local policies are endogenously determined. For example, local governments may want to promote more efficient enterprises because they are interested in their own revenues as owners of TVEs. Or they may want to assist TVEs in financial difficulty.

In this section, we briefly examine the extent of implementation of various promotion policies for rural industrialization by enterprise category, while keeping in mind the analytical difficulties mentioned above.[15]

Industrial Promotion Policies

Table 7-16 exhibits the proportions of enterprises that were supported by industrial promotion policies from 1990 to 1993 by kinds of enterprises. Direct loans and subsidies have been infrequent in the 1990s. More important were tax exemptions, both full and partial. According to the Income Tax Law for Joint Ventures, which was issued in 1980 and amended in 1983, JVs are wholly exempt from income taxes for the first two years and are given 50 percent reductions in the subsequent three years. Similarly, CTVEs were given various tax reductions. But favorable treatment was much less frequently given to ITVEs. Thus, tax policies clearly favor the development of CTVEs and JVs.

Table 7-16. Proportions of Enterprises Receiving Support from Industry Promotion Programs of Local Government, by Type of Enterprise, 1990–93
(percent)

Enterprise	*Subsidized loan*	*Direct subsidies*	*Tax exemption*	*Guaranteed bank loans*
ITVEs	0	0	50	63
CTVEs	2	13	88	88
JVs	5	19	76	67

Source: Authors' data.

Also important were the guarantees of local governments for loans to TVEs from state banks. It is well known that local governments are influential in the allocation of bank loans, which are often determined by administrative considerations. It is a common belief that while budget constraints have become "hard" as government subsidies have declined, the constraints on bank loans have become "soft," with loans easily available if local governments provide endorsements. In the frequency of local government provision of guarantees for bank loans, CTVEs were favored.[16] One possible interpretation is that local governments responded to the demand for investment funds by CTVEs because they played an important part in the establishment of CTVEs and expect high revenue from CTVEs in the future. By and large, however, local governments took some responsibility for the financial management of TVEs regardless of their relative efficiencies.

Provision of Infrastructure

In most of the areas where our sample enterprises are located, suburban industrial towns have developed through the rapid development of TVEs. In general, however, social infrastructure, such as roads, telephones, and electricity, was inadequately supplied.

Table 7-17 shows the proportions of enterprises that received improved infrastructure services from 1990 to 1993 by type of enterprise. This analysis is merely indicative; we did not collect detailed information about the intensity of the use of infrastructure services, nor did we know the quality of infrastructure services before 1990. For roads, telephones, and the supply of electricity, there were some tendencies for CTVEs and JVs to be favored over ITVEs.

Local governments sometimes offer short training courses for engineers and workers in the garment industry and provide market information, particularly about popular commodities and designs in foreign markets such as Japan. According to Table 7-17, CTVEs most often participated in training and information dissemination programs. Whether this is the choice of the governments or the enterprises, however, is difficult to ascertain.

In sum, there is some indication that local governments attempted to promote CTVEs and JVs more than ITVEs, particularly in tax policy and infrastructure development. Because CTVEs and JVs are more efficient than ITVEs, this selective promotion policy seems

Table 7-17. Proportions of Enterprises Receiving Improved Infrastructure Services Provided by Local Government, by Type of Enterprise, 1990–93
(percent)

Enterprise	*Road*	*Telephone*	*Electricity*	*Training and information*
ITVEs	31	50	19	19
CTVEs	63	63	13	50
JVs	57	90	38	29

Source: Authors' data.

consistent with the maximization of future revenue for local governments from the operation of TVEs.

Conclusions

The major advantages of TVEs over SEs are management and market environments free from government regulation on employment and wage policies and the availability of cheap, unskilled labor. Budget constraints are much harder for TVEs than SEs, because local governments do not support unprofitable TVEs as much as the central government supports such SEs. What is lacking for TVEs is technical and management know-how, marketing capacity, and financial resources. We therefore hypothesize that the key to the development of TVEs is entrepreneurship leading to successful innovation in the sense of Schumpeter—that is, introduction of new products, new technologies, and better management methods to rural industries and creation of new marketing channels. Within the context of the institutional setting in China, it is SEs that possess the technical skills, management know-how, and marketing channels. SEs are subject to regulation, including regulations on wage determination and dismissal of employees, that constrains them from seeking profits. Therefore, SEs have both the capacity and the incentive to play the role of entrepreneur in rural areas. Taking advantage of favorable policy environments for joint ventures, foreign enterprises also have interests in promoting rural industrialization.

In this study, we obtained clear evidence that TVEs have acquired technology, management know-how, and marketing channels from urban enterprises through subcontracts, cooperation with SEs, and the establishment of joint ventures with foreign enterprises. In other words, the traditional socialist enterprises evade the regulations by engaging in various contractual arrangements with TVEs. In the process, entrepreneurs have changed from rural-based to urban-based, indicating that the entrepreneurship required for the management of TVEs is scarce in rural areas. We also found that the establishment of CTVEs and JVs was a more comprehensive and thorough method of transferring technology and management skills, as well as strengthening marketing capacity, than subcontracts, which are essentially short-term contracts. ITVEs, which rely on short-term subcontracts, are much less productive than CTVEs and JVs. As a result, the number of ITVEs declined over time, as CTVEs and JVs rose.

Among the different motives behind the prevalence of subcontracts and interenterprise cooperation, improved access to markets was identified as the most compelling. Kikuchi (Chapter 5 in this volume) and Ohno and Jirapatpimol (Chapter 6 in this volume) found in the Philippines and Thailand, respectively, that in order to overcome marketing constraints in rural areas, putting-out contracts were adopted. In these countries, however, interenterprise cooperation, as observed in China, was not developed. In China, marketing channels are extremely limited, because marketing is still controlled by a relatively small number of state enterprises. Under such imperfect market conditions, reliance on short-term subcontracts did not assure stable transactions in inputs and outputs for TVEs.

ITVEs had to engage in costly transactions in newly emerging, but still underdeveloped, free markets. In our view, the essence of both domestic cooperation and joint ventures is to assure long-term, stable contractual relationships between enterprises, which include putting-out and other forms of subcontracts.

Another main feature of garment enterprises in China is their large size. One reason may be their proximity to major cities, which tend to be characterized by relatively high wages. Garment factories in large cities in other countries are also relatively large, even though they are usually smaller than TVEs in China. Of course, there is a possibility that TVEs do not seek profits because they are essentially "public enterprises." As we have seen, however, managers of TVEs have increasingly been appointed by the enterprises rather than by local governments. We also found that about 20 percent of the workers employed in our sample enterprises were from other areas, despite the common allegation that TVEs are constrained to employ only resident workers. In our view, the most plausible characterization of TVEs is that they are the "spin-off" of urban enterprises, which rely on urban-based managers, use high-speed sewing machines, and produce standardized products.

The puzzle is why TVEs did not develop another layer of subcontracts with smaller rural enterprises and workshops, as is widely practiced in other countries. As Itoh and Tanimoto (Chapter 3 in this volume) demonstrate, the operation of small, family-operated weaving workshops in a rural area of prewar Japan was supported by a large number of local merchants, local wholesalers, and national-level wholesalers who were connected by community ties and other long-standing relationships. Similarly, in Indonesia, small rural enterprises that process soybeans are supported by the finely structured network of village-based, town-based, and urban-based merchants (Hayami and Kawagoe 1993). Furthermore, Levy (1990) argues that the generally smaller size of enterprises in Taiwan, China, than in the Republic of Korea in the footwear industry can be explained largely by the active participation of traders in a large number of small transactions in Taiwan. In rural China, private traders play no role. Trading is still dominated by large state enterprises, state trading enterprises, and state-run retail shops. This is a legacy of the socialist system of commodity transactions based on the material balance in which no role is given to free market transactions. It will probably take some time to develop efficient marketing networks based on enduring personal relationships. Another constraint is the difficulty in establishing small private enterprises in rural areas because of the unclear protection of private properties in China (Chen and Rozelle 1995).

If our view is correct, unless and until an efficient private marketing sector develops, including a competitive network of local traders, wholesalers, and urban merchants, China's rural industrialization will continue to be led by large TVEs. Such an industrial organization, however, will not be truly efficient if a major advantage of rural industrialization lies in the low cost of labor management associated with the small size of an operation. As an efficient marketing sector develops, we expect to observe the development of subcontracts between large and small rural enterprises and between traders and small rural enterprises.

Notes

1. See an earlier literature survey by Perkins (1988), which also ascribes the success of economic growth in China to the growth of TVEs.

2. Strictly speaking, there are also urban collective enterprises, which are another form of traditional socialist enterprise. They are smaller than SEs, but similar to SEs in many respects.

3. In the garment industry in China, putting-out contracts in which the agent processes the material provided by the principal are uncommon. More common are cases in which the agent purchases the material and processes it for sale to the principal in accordance with contractual arrangements made in advance. We call the latter contract an "advance-order contract." Both of these contracts can be considered variants of the subcontract.

4. One may wonder if the relationship between CTVEs and their parent companies is similar to the relationship between part suppliers and the parent company of Toyoda discussed by Wada in Chapter 4. Although parent companies commonly provided technical assistance, there are more dissimilarities than similarities in the Toyoda case. While Toyoda attempted to develop long-standing, tight personal relationships with inexperienced part suppliers, SEs looked for promising TVEs in the garment business as partners for a specified period, typically ten years. In our observation, many CTVEs wish to become independent of the SEs after the contractual period rather than to continue the business relationship for longer periods, as in the case of Toyoda.

5. It is found that the size of enterprises and the type of technologies employed are generally similar among JVs, regardless of whether they are joint ventures with SEs or with TVEs.

6. This is particularly true for such products as men's shirts, women's blouses, and uniforms, but not necessarily so for men's suits, women's dresses, and baby clothes.

7. Note that the numbers here refer strictly to township- and village-run enterprises, with the exclusion of private enterprises.

8. They attempted to select thirty TVEs in each location, but the sample size was actually smaller in Beijing, partly because of the limited number of TVEs producing men's shirts and women's blouses, and partly because of poor responses to their questionnaire. A total of fifty-two TVEs were engaged in the garment industry in Shanghai and thirty-six in Beijing.

9. It may well be that the relatively low incidence of "free" provision of raw materials reflected the effect of the stringent monetary policies of the early 1990s, which resulted in a shortage of working capital for SEs.

10. Workers are motivated to produce larger quantities of output without regard to quality under piece-rate contracts, as is demonstrated by Stiglitz (1975).

11. Written contracts were prepared for 57 percent of subcontracts in the year of enterprise establishment.

12. Preferential tax treatment was also cited as another important reason for establishing JVs. In China, JVs are fully exempt from income tax payment for the first two years, and partly exempt (that is, 50 percent) for the subsequent three years.

13. Caution must be exercised in interpreting data in table 7-10, because the numbers were based on survey results not reported by all of our sample enterprises.

14. This is partially because TVEs do not have accurate information on the market values of raw materials and products, which are transacted under subcontracts.

15. In qualitative terms, the industry promotion policies of local governments in China are quite similar to the promotion policies for small- to medium-scale enterprises implemented by prefec-

tural governments in Japan. It is also interesting to note that parent enterprises usually provide technical and financial assistance to subcontractors in Japan (see Itoh and Urata 1994).

16. In our survey we had little success obtaining information on the average amount of bank loans, which is an important limitation of the analysis.

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8

Rural Entrepreneurship and Industrial Development in Korea

Jung-Hwan Lee and Chong-Hyuk Suh

Until the early 1960s, the Republic of Korea had remained a typical preindustrial country; half its gross national product (GNP) was generated by the agricultural sector. A vigorous export-oriented industrialization policy begun in 1962, however, transformed the low-income agrarian economy into a middle-income industrialized economy. GNP has expanded at an average annual rate of 7 percent during the last thirty years; per capita GNP was more than US$7,000 in 1993 and was expected to reach US$10,000 in 1995.

Although Korea has accomplished successful industrial development, the nation is far behind in rural industrial development compared with Japan and Taiwan, China. As a result, a large number of rural people have migrated to a few large cities; population has been declining rapidly in many rural areas while explosive population growth has occurred in a few cities. The growth of population was so fast in a few of the largest cities that urban infrastructure could not keep up with the expansion of the urban areas. Korean society could not help developing a number of urban problems, including housing, traffic, and environmental turmoil.

The income disparity between farm and nonfarm households has been persistent. In 1990 the average farm household income was about 84 percent of its urban counterpart, while it was 112 percent in Japan (see table 8-1). Moreover, there is no prospect for improving this gap with agricultural income in the near future. The growth rate of the farm sector is not anticipated to surpass that of the nonagricultural sector, and farm household income will be adversely affected by trade liberalization. Most agricultural products, including rice, cannot compete with imported foreign products.

Income parity between farm and nonfarm households in Japan is partly attributed to the very large portion of farm household income that comes from off-farm activities. When

Table 8-1. Income Disparities Between Farm and Nonfarm Households in Korea, Japan, and Taiwan (China), Selected Years

	Household income in Korea (1,000 won)		*Farm-nonfarm disparity (percent)*		
Year	*Urban (A)*	*Farm (B)*	*Korea (B/A)*	*Japan*	*Taiwan, China*
1965	113	112	99.1	99.2	94.8[a]
1970	381	256	67.2	110.1	72.2
1975	859	873	102.0	126.1	79.6
1980	3,205	2,693	84.0	118.0	74.2
1985	6,044	5,736	94.9	110.5	71.3
1990	13,184	11,026	83.6	111.6	66.4[b]
1992	19,416	14,505	75.8	n.a.	n.a.

n.a. Not available.

a. 1966 data.

b. 1989 data.

Source: Korea: Economic Planning Board, *Annual Report of Urban Household Survey;* Ministry of Agriculture and Fishery, *Report of Farm Household Economy Survey.* Japan: Ministry of Agriculture and Fishery, *Report of Farm Household Economy Survey,* Office of Economic Planning, *Annual Report of Household Survey.* Taiwan, China: Taiwan Provincial Government, *Survey Report of Household's Income and Expenditure,* selected years.

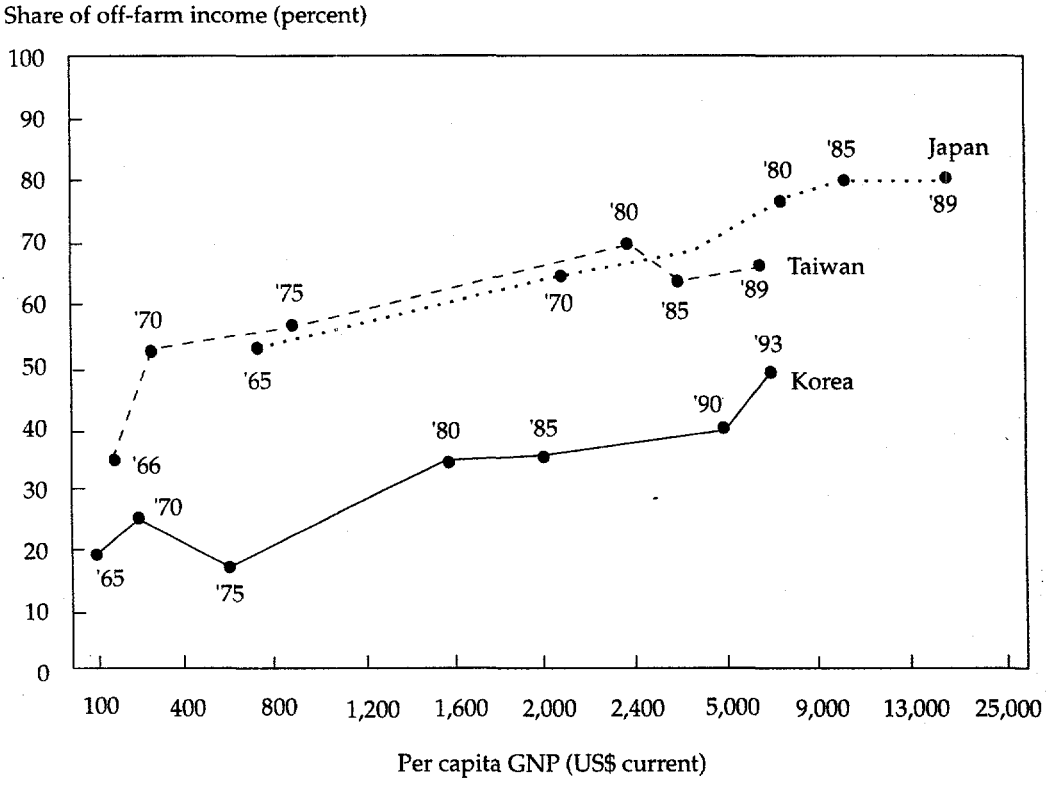
per capita GNP was about US$5,000 in current prices, the share of off-farm income out of total farm household income was about 38 percent in Korea, while it was about 60 percent and 58 percent in Japan and Taiwan, China, respectively (figure 8-1). This consideration leads us to the notion that off-farm income is very important for small Korean farmers and that the development of rural industry is critically important for their well-being in the future.

This information raises a basic question: why has rural industry been so underdeveloped in Korea, while Japan and Taiwan, China, have achieved successful rural industrialization in the process of industrial development? This issue has important policy implications for many developing countries as well as for Korea. The prevailing answers to this basic question in Korea can be summarized in two general assertions. The first is the notion that government support to rural enterprises was inadequate to promote rural industrialization, and government support should have been substantially increased to promote rural industry (Choe and Lee 1984; Kim 1987). The second notion is that the industrial policy of the Korean government was heavily biased toward large, vertically integrated enterprises and that small enterprises, including rural industry, could barely develop, in spite of government support (Kim and Whang 1987; Lee and others 1995).

These assertions may partly answer the question, but they cannot be reconciled with the substantial effort of the Korean government to promote rural industrialization and the success of rural industrialization in some areas. It remains to be explained why government efforts did not yield good results and why industrialization was successful in some rural areas in spite of its overall failure.

In order to find a coherent answer to the question raised above, macro and micro approaches are taken in this study. In the macro analysis, the initial conditions for rural in-

Figure 8-1. Share of Off-Farm Income in Farm Household Income in Korea, Japan, and Taiwan (China), Selected Years



Source: Suh and others (1991: 191).

dustrialization, the government industrial development policies, and the condition of rural areas for industrial development will be investigated, based mainly on secondary data and literature surveys. The micro analysis is based on a case study conducted in an area of successful rural industrialization. This analysis will focus on the factors that contributed to the success of rural industrialization in the study area.

Historical Sketch of Rural Industrialization Policy in Korea

The Korean government has made efforts to promote rural industry for decades. At the end of the 1960s, the government began to adopt rural industrial development policies to alleviate the regional disparity between urban and rural areas. In 1968 the Farm Household Side-Business Program was introduced to promote traditional rural manufacturing activities. It is also to be noted that the Agriculture and Fishery Development Corporation

was founded in 1967 by the government to increase the processing of agricultural products in rural areas. And in 1973 the Saemaul Factory Program (a program promoting small village factories) was launched to establish independent factories in rural areas.

The farm households that participated in the Side-Business Program were encouraged to produce folk crafts, processed agricultural and livestock products, and unsophisticated rural household items such as brooms made of bush clover. About one-third were small-scale factories, while the rest were cottage handicraft operations. Almost all of the farm households participating in this program, however, suffered from poor sales promotion and lack of operating funds.

The Agriculture and Fishery Development Corporation established twenty-three companies for processing agricultural products in rural areas. Most of them suffered from poor management and marketing and were transferred to private companies by the mid-1970s.

The Saemaul Factory Program was designed to stimulate the rural economy and to provide more nonfarm job opportunities to farmers through the establishment of independent factories in rural areas. Preferential credits were extended to the Saemaul factories for investment in plant and equipment, as well as to provide initial operating funds. Tax reductions or exemptions were also offered to the factories. Six-hundred and eighty-six designated factories were active in 1984, when this program was terminated by the government. The program originally planned to establish more than one factory in each township, but less than half the townships received a Saemaul factory. Moreover, more than 50 percent of the factories were located in the vicinity of large cities. More important, many of the Saemaul factories were eventually shut down. In the end, the Saemaul Factory Program did not contribute much to creating nonfarm employment in rural areas (Suh and others 1991: 6).

In the 1980s, rural industrialization policy shifted to emphasize the construction of rural industrial estates in order to provide needed infrastructure for rural enterprises. Rural industrialization was conceived as the most important farm-income policy under the ongoing liberalization of the agricultural market, so that rural industrial estates were strongly emphasized by the government.

In order to accelerate rural industrialization, the government enacted the Farm Household Income Source Development Act in 1983. Under the provisions of this act, industrial estates were to be built in the center of rural areas. The size of these estates was to range from 33,000 to 99,000 square meters. Government supports were provided to the firms or farm households participating in this program. Firms participating in the Rural Industrial Estate Program received direct subsidies for land acquisition, subsidized loans for factory construction and operation, and exemption from income and property taxes.

During 1984–90, a total of 201 billion won (US$258 million) in direct subsidies were provided to the rural enterprises participating in the government programs. During the same period, about 837 billion won (US$1,074 million) in concessional policy loans was provided to participating firms or farm households. A large portion of these direct subsidies and concessional policy loans was allocated to the Rural Industrial Estates Program. About 94 percent of direct subsidies and 86 percent of concessional government loans were allocated to firms or entrepreneurs participating in this program.

Table 8-2. The Number of Firms and Employees in Rural Industry

	Total			
	Number	*Number of employees*	*Share of rural area*	
Year	*of firms*	*(1,000s)*	*Firms*	*Employees*
1955	8,810	n.a.	44.0	n.a.
1958	12,971	260	38.2	24.2
1970	24,114	861	32.5	17.2
1975	22,787	1,420	26.7	16.1
1980	30,823	2,015	28.7	20.8
1985	44,047	2,438	21.2	20.1
1990	68,872	3,020	23.3	21.0
1991	72,213	2,918	24.0	28.2

n.a. Not available.

Source: Survey of Mining and Manufacturing Firms, Ministry of Commerce and Industry (1993).

Although the Korean government has operated these rural industrial development programs over the last twenty-five years, the results have been far short of what was intended. First, many rural industrial estates have suffered from underutilization of their capacity because few enterprises actually moved into the estates, and many of the enterprises that did move in have gone bankrupt. Second, the number of rural firms has doubled during the past twenty years, but their share in the total number of enterprises has substantially decreased. The percentage of rural firms out of the total number of firms was 33 percent in 1970, but about 24 percent in 1991, meaning that urban concentration has increased (table 8-2). Third, even in rural areas, manufacturing activities are not evenly distributed. Most rural enterprises are located in the vicinity of large cities and industrial zones, mainly Seoul, Pusan, Taegu, and southeastern coastal areas.

Macro Perspective on the Reasons for Unsuccessful Rural Industrialization

There was little basis for entrepreneurship in rural areas in the initial stage of industrialization in Korea. Throughout its long history, Korea had been a centralized society in which local administrators appointed by the central government were not very interested in the development of infrastructure and industries in the areas of their mandate because their job security was not guaranteed. Historical records indicate that, on average, local administrators served in a position for less than two years.

Similarly, local entrepreneurs were not interested in developing specialized manufacturing products because a special commodity tax was charged whenever a new commodity was developed (Kang 1984). At the same time, private entrepreneurs were not regarded as a respectable class in traditional Korean society. Such social customs continued until the

early twentieth century. Thus, most educated and capable persons were not willing to engage in commercial and industrial activities.

Moreover, during the thirty-six years of the Japanese colonial period (1910–45), most industrial facilities were developed in the northern part of Korea because of favorable endowments of mineral and hydraulic resources. Agriculture was developed in the south because of its favorable agricultural land endowment. Furthermore, the Korean War of 1950–53 thoroughly destroyed the industrial basis; few industrial facilities and little infrastructure remained after the war. For example, about 40 percent of paved roads were destroyed between 1947 and 1953 (as shown below). In addition, social as well as human relationships in rural communities, which are very important factors for the development of rural entrepreneurship, were seriously disrupted during the war.

Because the initial conditions for industrialization were so poor, the Korean government took strong initiatives in industrial development by introducing a series of ambitious five-year economic development plans. To accelerate industrial development, from the beginning the industrial policy concentrated on strategic sectors and relatively advantageous areas—large enterprises, export-oriented and heavy industries, and a few urban areas (Choe and Kim 1986). For example, from the mid-1960s to the early 1980s, the government developed industrial estates in a few local growth areas and strongly promoted new modern enterprises in big cities. Large amounts of concessional loans were directed to these enterprises. As a result, very few funds and little effort were available from the government to develop small rural enterprises.

The strong bias of government's industrial policy toward new, modern enterprises in large cities triggered a massive out-migration from rural areas beginning in the mid-1960s. Until that time, the annual net off-farm migration rate was only 1.22 percent, as shown in table 8-3. The rate increased to 4.05 percent in the late 1960s, however, and to more than 5 percent in the late 1970s. Most migrants were young and educated. For example, the migration rate was around 8–11 percent for those younger than thirty (table 8-4). It is also to be noted that the migration rate of young women was much higher than for their male counterparts.

As a result, for industries located in rural areas, acquiring young and/or female labor became more difficult, and the advantage of cheap labor faded in rural areas. This change is partially revealed by the wage ratios between the rural and urban sectors in the 1970s and 1980s, as shown in table 8-5. In this table, urban wages are represented by the wages

Table 8-3. Net Off-Farm Migration and Migration Rates

	1960–66	*1966–70*	*1970–75*	*1975–80*	*1980–94*
Net off-farm migration (1,000s)	1,133	2,516	2,561	3,350	2,449
Migration rate (annual percentage)	1.22	4.05	3.60	5.39	5.95

Source: Park (1989).

Table 8-4. Net Off-Farm Migration Rates by Age and Gender
(annual percentage)

	1966–70		*1975–80*	
Age	*Male*	*Female*	*Male*	*Female*
13–17	7.8	9.9	11.0	11.7
18–22	6.5	10.2	7.2	10.4
23–27	8.9	9.4	8.3	9.9
28–32	7.1	2.9	3.3	2.0
33–37	1.7	1.1	1.8	1.5

Source: Sloboda (1982).

for workers in production and related sectors, the workers most in demand in small industry. According to this table, in the 1970s and 1980s, male wages in rural areas were approximately 80 percent of urban male wages, and female wages were higher in rural areas than in the urban sector.

The wage comparison in table 8-5, however, may overstate the actual rural-urban wage parity because rural wages are represented by the wages for daily workers, who are generally hired during the peak seasons—that is, rice transplanting and harvesting periods. In real wages, the figures in table 8-5 may understate the rural-urban wage ratios because the cost of living in rural areas is likely to be lower than in urban areas. In spite of these reservations, we can say that very tight labor supply conditions have prevailed in rural areas. A survey revealed that 42 percent of rural entrepreneurs pointed to their difficulty in acquiring qualified labor as the most difficult problem they faced (Suh and others 1991:229–31).

Table 8-5. Wage Ratio Between Rural and Urban Sector by Gender

Year	*Male*	*Female*	*Average*
1972	0.78	1.17	0.97
1975	0.79	1.16	0.98
1978	0.77	1.15	0.96
1981	0.90	1.37	1.13
1984	0.82	1.19	1.01
1987	0.74	0.99	0.86
1990	0.76	0.96	0.86

Note: Rural wage includes all payment of cash and in kind for farm workers. Urban wage denotes all payment, including overtime and bonus for production and related workers.

Source: Ministry of Agriculture and Fishery, *Statistical Yearbook* (annual). Ministry of Labor, *Yearbook of Labor Statistics* (annual).

It should also to be noted that rural-urban wage parity does not necessarily mean income parity between farm and nonfarm households, because the working hours of family farm workers are limited by the seasonality of labor demand in farming, particularly rice farming. As mentioned earlier, the income difference between farm and nonfarm households has been persistent.

Another cause of unsuccessful rural industrialization can be seen in misdirected government efforts to promote rural industrialization. First, government efforts were directed to the provision of direct incentives to enterprises, as mentioned in the previous section, and the importance of preconditions for industrial development in rural areas was neglected (see Chapter 9 in this volume by Lane). As a result, transportation facilities, electrification, and credit markets were barely developed in rural areas.

For example, almost all provincial roads were unpaved until the late 1970s, as shown in table 8-6 and figure 8-2. The density of paved highway in Taiwan, China, was 76.4 kilometers per thousand square kilometers in 1962 and 214.5 in 1972, while in Korea it was only 10 kilometers in 1960 fewer than 50 kilometers in 1975. At the same time, only 12.6 percent of Korean farm households had electricity in 1964 and 61.1 percent by 1974, while in Taiwan, China, electrification of farm households had reached 70 percent by 1960 (Ho 1982; Keidel 1982).

Because of the poor infrastructure and unfavorable labor supply, many enterprises preferred to locate in urban areas. Many kinds of pecuniary and nonpecuniary incentives provided by the government to newly established enterprises in rural areas had only marginal influence on attracting entrepreneurs to rural areas. It was still risky, in spite of the incentives, to start a business in a rural area; the only advantage in rural areas was cheap land prices.

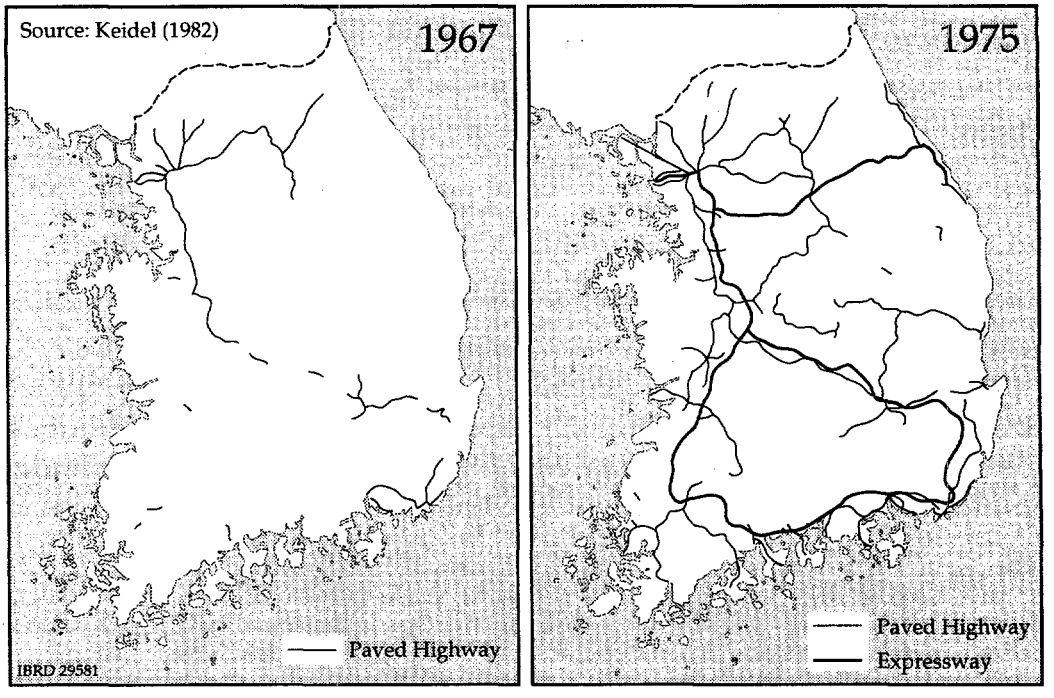
Second, the rural industrialization policy emphasized industrialization *in* rural areas rather than industrialization *of* rural areas (Suh 1994). In other words, central as well as local governments have neglected the importance of rural entrepreneurship rooted in the community, instead emphasizing the relocation of transplanting urban entrepreneurs or urban enterprises to rural areas by providing direct incentives. All of these direct incen-

Table 8-6. Length and Share of Paved Highway

	Length of highway (km)		*Share of paved way (percent)*		
Year	*Total*	*Paved*	*Total*	*National way*	*Provincial*
1936	24,283	538	2.2	4.8	0.4
1947	24,433	1,061	4.3	14.1	0.7
1953	26,033	611	2.3	5.1	0.3
1961	27,169	1,122	4.1	12.6	0.5
1967	34,799	2,092	6.0	17.6	0.5
1975	44,905	10,000	22.3	44.0	0.5
1980	46,951	15,599	33.2	67.4	12.6
1990	56,715	40,545	71.5	89.1	63.6

Source: Ministry of Construction, *Statistical Yearbook,* 1960 and thereafter.

Figure 8-2. Paved National Highway in the Republic of Korea



tives were provided only to enterprises involved in the government programs. In order to be involved in the government programs, enterprises must pass the selection procedure of the government-nominated institute. It is likely that the selection procedure was biased toward external conditions, including funding capacity, because the government was unaware of the importance of rural entrepreneurship rooted in the community. Most rural entrepreneurs were likely to be too small and too new to meet the criteria. As a result, the suffocation of rural entrepreneurship was even greater under the policy to move urban enterprises into rural areas than it had been before government intervention. Meanwhile, transplanted enterprises faced serious difficulties in adapting to new and unfamiliar business environments and failed to take root.

A Case of Successful Rural Industrialization in Korea

To confirm the broad perspective presented above, we conducted a case study that focused on the role of rural entrepreneurs and their relationship to industrial development in a rural area. The Punggi area, very remote but very successful in rural industrialization, was selected as the case study site.

An intensive method was adopted to collect data and information relating to historical changes in the production and marketing systems of Punggi's weaving industry. The researchers had many interviews with weavers, wholesalers, and officers working in the Taegu-Kyungbook Weavers' Cooperative and county offices from September 1994 to May 1995. Data on the rural industrial development policy program implemented at the local level were collected from YoungPoong, Bongwha County, and YoungJoo City offices.

Punggi is a typical small, rural township located in YoungPoong County, in the northern part of Kyongsang Book-Do Province. This area does not have a locational advantage for industrial activities because it is mountainous and far from large cities (figure 8-3). Nevertheless, this area is a very successful case of rural industrial development. As shown in table 8-7, there were 170 manufacturing enterprises in this county in 1994, which contrasts greatly with the neighboring areas of Bonwha County and YoungJoo City.

YoungPoong County's success in rural industrial development is mainly attributed to the growth of the weaving industry in the Punggi area. Of the 170 small manufacturing factories, 145 are engaged in weaving synthetic cloth using rayon, nylon, and polyester yarn. The product is mainly used for lining cloth, and 80 percent of the total national production of lining cloth is produced in this area.

In 1993 the total value of cloth production was about 53 billion won (US$66 million), which was equivalent to one-third of the total gross regional production of the county

Figure 8-3. Map of Study Area

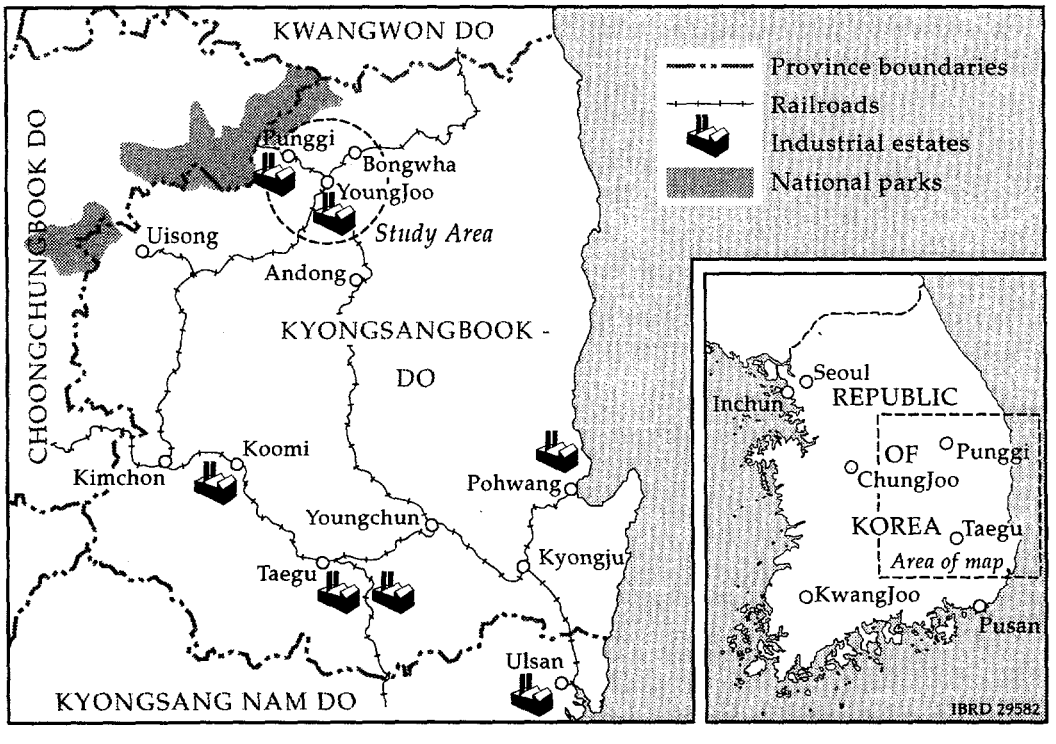


Table 8-7. Number of Manufacturing Firms in the Study Area, End of 1994

County or city	*Cloth*	*Food*	*Other*	*Total*
YoungPoong	145	15	10	170
Bongwha	1	1	21	23
YongJoo	5	6	31	47

Note: The numbers include only firms employing more than five workers.
Source: Statistical Yearbook of each county.

(table 8-8). About 1,000 local employees work in the weaving industry and receive about 600 million won (US$750,000) monthly in wages. The weaving industry contributes substantially to the employment and nonfarm income of the rural households in this area.

Socioeconomic Change and Development of the Production System in the Punggi Weaving Industry

The weaving industry in the Punggi area has a long history. About sixty years ago, a silk weaving factory was established by an immigrant from Pyungannam-Do Province, in the northeastern part of northern Korea. Before he came to Punggi, he had operated a weaving factory in his home town. In the late 1940s the weaving industry in the Punggi area began to produce rayon cloth instead of silk, and the number of weaving factories increased dramatically from 5 in 1945 to 120 in 1951, as shown in table 8-9. This expansion was attributed in part to the many immigrants from northern Korean who moved into the Punggi area and started weaving businesses. The expansion, however, was accelerated by the Korean War. Most weaving factories, as well as infrastructure in other regions, were destroyed during the war, while the Punggi area was untouched. Punggi rushed to fill domestic demand for rayon cloth. Punggi had good initial conditions compared with other areas because it received the input of new entrepreneurs and its industrial basis was preserved.

Table 8-8. Quantity and Value of Weaving Cloth Produced in the Punggi Area, 1992–93

	Quantity (1,000 yards)			*Value (million won)*		
Cloth	*1992 (A)*	*1993 (B)*	*B/A (percent)*	*1992 (A)*	*1993 (B)*	*B/A (percent)*
Total	95,700	105,300	110.0	49,764	52,650	105.8
Rayon	11,797	21,060	178.5	7,343	12,630	172.0
Acetate	31,128	21,060	67.6	16,361	9,900	60.5
Nylon	25,222	29,480	116.9	10,868	13,270	122.1
Polyester	27,553	33,700	122.3	15,192	16,850	110.9

Source: Taegu-Kyungbook Weaver's Cooperative (1994).

Table 8-9. Number of Weaving Factories in Punggi Area, Selected Years

	1938	*1945*	*1948*	*1951*	*1968*	*1985*	*1988*	*1994*[a]
Number	2	5	31	120	48	76	100	160

a. Includes firms employing fewer than five workers.

Source: Taegu-Kyungbook Weaver's Industrial Cooperative (1994).

Punggi's weaving industry faced its first depression at the end of the 1950s. By this time, most industrial facilities—including weaving facilities—in other areas had recovered from the war, and industrial production regained its prewar level. Moreover, rayon cloth produced in the Punggi area was inferior in quality because weaving enterprises in urban areas had adopted electric weaving machinery, while those of Punggi still used handlooms.

Therefore, Punggi weavers lost in the competition with urban weavers because of the low quality of their products and their high production costs. To make matters worse, nylon cloth began to be produced by the urban weaving industry. Demand for the rayon cloth produced in the Punggi area decreased rapidly because most customers substituted nylon for rayon cloth in garment production. Yet Punggi producers could not adopt electric weaving machinery because there was no electricity in their area. They tried using gas engines as a source of power for weaving machinery, but these could not provide sufficient power to produce high-quality rayon as well as synthetic cloth. As a result, Punggi's weaving industry faced a serious depression.

The situation changed at the end of the 1960s, when the government constructed an electric railroad through the Punggi area. With this electricity, electric looms could be introduced, and many factories began to use nylon and polyester yarn. To reduce the large amount of investment needed for machinery, they bought secondhand looms from urban weaving enterprises in Taegu, Taegeon, and Mokpo. Labor productivity increased as much as two to six times.

Along with adopting electric looms, weavers also began to change their final products. Instead of rayon cloth for garments, they began to produce nylon and polyester cloth for lining garments and bags. It must be noted that electrification played a critical role in Punggi's weaving industry.

Fortunately, weavers in Punggi could use bank loans instead of private credit to finance this new investment. This was made possible when a formal financial institution, the Citizens Bank, was established in YoungJoo City in 1963, and the government urged the bank to provide loans to weaving enterprises. This was a great opportunity for the enterprises because the annual interest rate for these loans was about 25 percent, while the rate for private loans was about 60 or 70 percent. The introduction of this credit institution was another contributing factor in the second expansion of Punggi's weaving industry.

In 1986, many enterprises began to adopt labor-saving technologies because of a labor shortage. They tried to replace labor with new machinery. Air-jet and water-jet weaving machinery and a shuttle-change system were adopted to increase labor productivity. Also,

Table 8-10. Historical Changes of the Punggi Weaving Industry

Stage of industrial development	*Period*	*Production*	*Technology*	*Machines operated by a worker*	*Social situation*
Starting stage	1934–47	Cottage	Hand loom	1	Japanese colonial time
First expansion stage	1948–59	Cottage	Hand loom	1	Before and after Korean War
First depression stage	1960–67	Cottage	Hand loom	1	Introduction of nylon yarn
Second expansion stage	1968–85	Cottage and factory	Electrical weaving loom (motor system)	2 (4–6)	Adoption of electric power
Third expansion stage	1986–present	Cottage and factory	Air and water-jet weaving loom (shuttle change system)	14–20	Spread of labor union

Source: Authors' data.

many skilled laborers began to establish their own weaving enterprises with the aid of their previous employers. As a result, the number of weaving factories increased rapidly after 1986, although most have remained small-scale, cottage-style factories.

Transformation from cottage to modern factories was made possible by the construction of rural industrial estates in this area. Based on the Farm Household Income Source Development Act, a rural industrial estate of 105,000 square meters was constructed in the Punggi area by the government in 1989. Twenty-four weaving enterprises moved into this industrial estate and were able to make the transition from cottage to modern factory operations.

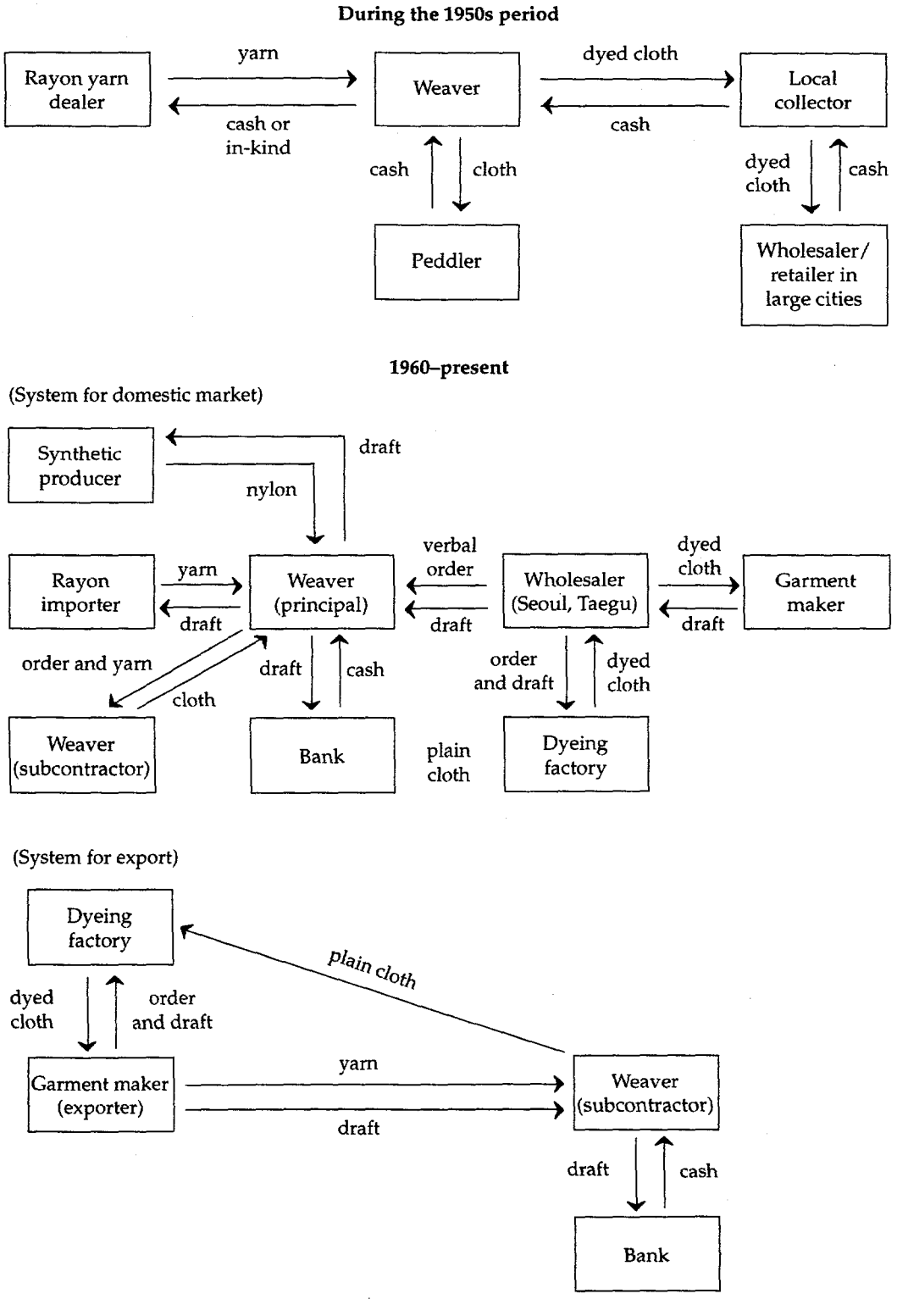
Development of Marketing Systems

The development of a marketing system is essential to promote rural industrialization, especially in remote places such as the Punggi area. The weaving industry of the Punggi area has developed a unique marketing system, as shown in figure 8-4, which has contributed substantially to the success of the area's weaving industry. The marketing system has developed in concert with changes in technology and market demand.

As mentioned earlier, the weaving industry in other areas was destroyed by the Korean War, while Punggi's weaving factories were left intact. As a result, many local collectors and peddlers rushed to this area to purchase rayon cloth with cash. In other words, the market for rayon cloth was a seller's market and transactions were made in a kind of village spot market between the weavers and many buyers.

At that time, rayon weavers had their own dyeing facilities and dyed plain cloth themselves. Meanwhile, rayon yarn was supplied to weavers by yarn dealers, and payment to

Figure 8-4. Marketing System of Punggi's Woven Cloth



the yarn dealers was made in cash or in kind, mostly in woven cloth. In-kind payments were very common at that time because of the scarcity of cloth and high inflation.

Nevertheless, this system could not continue indefinitely, because the market for rayon cloth became competitive following the development of many new enterprises in other areas, and the marketing system was changed in the 1960s. Two marketing systems have developed in the Punggi area: the "putting-out contract," in which the principal advances materials for processing to his agent and later collects the finished products at a piece-rate payment, and the "advance-order contract," in which the principal guarantees the purchase of the finished products but does not advance materials (see Chapter 1 by Hayami in this volume).

About 48 percent of weaving manufacturers trade in advance-order contracts with wholesalers in Seoul, as shown in table 8-11. They have no written contracts. Instead, verbal orders by telephone are very common. Both parties—weaver and wholesaler—expect the transaction to continue to be repeated as long as contractual agreements are observed.

A wholesaler places an order with a weaver for the delivery of plain cloth to a dyeing factory. At the same time, the wholesaler specifies a color and pattern to the dyeing factory for dyeing the plain cloth delivered by the weaver. Most dyeing factories are located in Ansan Industrial Estate near Seoul. The weaver delivers his product to the dyeing factory selected by the wholesaler and receives a certificate of delivery. Dyed cloth is delivered to the wholesaler by the dyer, and most of the dyed cloth is sold for lining to garment makers. It is worthwhile to note that the dimension and quality of the cloth are rarely checked when the cloth is delivered to the dyeing factory and then to wholesaler. This reflects the close, long-term relationship and credibility established between them. Even without inspection, very few claims are put forward by garment makers, and they don't think the time and effort involved in inspecting the cloth are worthwhile.

In other words, wholesalers organize two stages of subcontracts to acquire the final product of lining cloth: the first is the advance-order contract with weavers, and the other is the putting-out contract with dyeing factories. It is to be noted that while weaving manufacturers do not have dyeing facilities now, they did until the 1950s. There were two reasons for this change: (1) in the Punggi area, it is difficult to operate a dyeing factory because of government regulations on pollution in rural areas; and (2) wholesalers prefer to send the cloth to specialized dying factories because weavers do not have much information or

Table 8-11. Number of Weaving Enterprises by Form of Contract, 1994

Form	*Number of firms*	
Advance-order contract (A)	75	(47.8)
Putting-out contract (B)	53	(33.8)
Mixed (A + B)	29	(18.4)
Total	157[a]	(100)

Note: Parentheses represent percentages.

a. This figure excludes three enterprises that were not operated at the time of survey.

Source: Authors' data.

sense of fashion in the important areas of color, technology, and quality, and thus it is not worthwhile for weavers to maintain dyeing facilities.

As payment, weavers receive drafts payable after three months, and they usually ask for cash from the local financial institution in exchange for the draft. The financial institution pays cash to the weaver in exchange for the draft after taking collateral equivalent to the face value of the draft. The weaver pays an annual interest of 12 to 17 percent to the financial institution. Meanwhile, weaving manufacturers buy synthetic or rayon yarn directly from yarn producers or importers. The weaver pays a three-month draft, instead of cash, to the yarn suppliers.

Thirty-four percent of weaving manufacturers produce woven cloth on the basis of the putting-out contract system. The principals are usually garment exporters in urban areas, but they are sometimes weavers in the Punggi area. The garment exporter gives an order to the weaver for processing the yarn provided. Time of delivery and quality standards are strictly enforced by the garment exporter. If the weaving manufacturer violates the terms of delivery, the exporter puts in a claim for the violation. The manufacturer delivers plain cloth to the dyeing factory, as in the case of the advance-order contract system. The garmentmaker pays the weaving enterprises at a piece rate, usually based on the length of the woven cloth.

Exporters prefer the putting-out system to the advance-order system because, as pointed out by Hayami in Chapter 1, the principal can use the provision of raw material as credit paid in advance to the subcontractor and use it as a strong instrument to enforce commodity delivery and quality standards among weavers.

Another type of putting-out contract is made between a small cottage weaver and a large factory weaver. The principal weaver gives an order to a subcontracting weaver for processing the yarn he or she provides, and later collects the woven cloth. In this case, the larger firm is usually the previous employer of the owner of the smaller weaving firm. The principal weaver uses putting-out contracts as a short-cut to expand his sales without expanding the size of the factory. This relationship is described in detail in the following section.

Because the terms of contracts are different in these two kinds of contract systems, a weaver must choose one system. For a weaver who has enough operational funds and secures a wholesaler to buy his products, an advance-order contract is preferable because he usually earns more profit per unit of weaving machinery with this system. At the same time, the weaver will bear the risks, because the draft issued by the wholesaler would become worthless if the wholesaler were to go bankrupt.

To a weaver who has the ability to operate, but not enough operational funds and insufficient reliable wholesalers to buy his products, the putting-out contract system is preferable. In this system, he produces woven cloth on the basis of a subcontract that usually specifies quality standards, a loss rate, and the time of delivery. Because the yarn is provided by the principal, the weaver does not need much in the way of operational funds, except funds for wages and miscellaneous expenses.

Evolution of Entrepreneurship

Development of the weaving industry in the Punggi area might not have been possible without the emergence of capable entrepreneurs. The managerial capacity of current entrepreneurs, as well as the generation of new entrepreneurs, is essential for the sustainable development of Punggi's weaving industry. Entrepreneurs can be categorized into new entrants of local origin and immigrants or children of immigrants. In 1994 about 72 percent of weaving factories were owned and operated by entrepreneurs of local origin (table 8-12). At the same time, 28 percent of the factories were operated by immigrants from northern Korea or their children. Before the 1970s, the share of immigrants or their children was dominant, and they represented about 70 percent in 1970.

The emergence of new entrepreneurs of local origin is very similar to the apprenticeship system in Western society. Drawing on interviews with many weavers, we can tentatively say that a potential entrepreneur of local origin usually follows a course of learning to become a weaving manufacturer before embarking on independent work.

A potential entrepreneur usually joins a weaving factory as an unskilled worker. He spends ten to fifteen years learning skills related to weaving production; he receives normal wages. After this on-the-job training, he may want to start his own business, but he needs a certain amount of capital for the new business and must find a wholesaler to buy his product. It is difficult for him to mobilize sufficient funds to start a new business and to find a wholesaler to buy his product. In this circumstance, the enterprise where he served as a skilled worker can play the role of patron.

The patron enterprise sells two or three used weaving machines to the entrepreneur on credit. The payment for the machines can usually be postponed for up to twelve months. At the same time, the patron enterprise offers to make the individual a subcontractor if he has been a diligent worker and proved to be a reliable and credible person. In this subcontract system, the patron enterprise provides his subcontractor with yarn and prescribes the level of quality and the loss rate for the production of cloth. Payment for the order is made on a piece-rate basis after delivery.

The patron-client relationship usually continues for a few years. During this period, the new entrepreneur not only learns management skills but also finds wholesalers to buy his product. If he performs this process well, then he can be an independent entrepreneur by the age of thirty-five to forty.

Table 8-12. Origin of Entrepreneurs in the Weaving Industries in Punggi Area, 1994

Origin	*Number*	*Percent*
Immigrants from northern Korea	15	9.4
Second generation of immigrants	30	18.8
Local origin	115	71.8
Total	160	100.0

Source: Authors' data.

In the case of a second-generation entrepreneur, the successor to the entrepreneur usually joins the weaving factory in his twenties to learn business management. After five to ten years of management training, he becomes the executive vice president of his parents' enterprise. At this stage, he is in charge of managing the enterprise, under the supervision of his parents. Several years later, usually in his late thirties or early forties, he becomes the president of the enterprise.

With these patterns of the emergence of new entrepreneurs, the weaving industry has been prosperous in the Punggi area. The existence of many small enterprises and the subcontract system have played the role of a seed-bed for the emergence of new entrepreneurs, as asserted by previous studies (Staley and Morse 1965: 232–35; O'Farrell and Crouchley 1985: 117; Rao and Rani 1994: 123–27). Because there are many small enterprises, workers can learn many techniques of production, marketing, and procurement of raw materials. Hence, they may acquire the general knowledge and information that is essential to start their own businesses.

Let us trace the history of some typical weaving enterprises to show the emergence process of new weaving entrepreneurs. Three typical cases are presented below.

CASE 1: HYUNG-DONG KIM, OWNER OF THE DONG HOONG WEAVING FACTORY. Kim has operated his own weaving factory since 1969, and he is now considered one of the most successful weaving businessmen in the Punggi area. He operates a well-structured weaving factory with twenty-three employees in the Bonghyun Industrial Estate. He is a high school graduate and is fifty-six years old. He served as president of the Punggi Weavers' Cooperative, which is a member of the Taegu-Kyungbook Weavers' Cooperative.

Until 1969, Kim had worked in a weaving factory as a spinner. He made up his mind to start his own business and bought eight secondhand weaving machines. He installed them in the kitchen of his house and began to produce woven cloth for the patron factory on a putting-out contract.

He did not have to worry about sales and could concentrate on production while he relied on the putting-out contract system. After seven years, he was able to afford his own factory and decided to find a wholesaler who would buy his woven cloth on an advance-order contract.

Kim walked through the wholesale markets for woven cloth in Taegu and Seoul several times. Whenever he met a wholesaler, he guaranteed the dimensions of his products because many weavers cheat on the dimensions of theirs. He was able to find two interested wholesalers in Seoul and began to sell his woven cloth on advance-order contracts. The number of wholesalers that buy his products has increased because he has maintained strong credibility.

Since 1987, Kim has offered to start some of his employees in their own weaving businesses under putting-out contracts because he could not fill all his orders from wholesalers. At present, he has eight subcontractors.

CASE 2: JAE-DOO LEE, OWNER OF THE DOO SAN WEAVING FACTORY. Lee is forty-one years old and operates a cottage-style workshop with his wife. He was born in a village of

YoungPoong County. When he was seventeen years old, he started to work in a weaving factory as an unskilled employee. From 1972 to 1989 he worked in four weaving factories in the Punggi area. In 1990 he started his own weaving business with the aid of his previous employer, Hyung-Dong Kim, owner of the Dong Hoong Weaving Factory mentioned in Case 1.

Kim believed in Lee's ability to operate a weaving factory because he had been a diligent and credible worker while he was Kim's employee. Kim helped him in two ways: he gave him the chance of a putting-out contract and gave advice whenever Lee had a problem operating his factory. Lee currently has sixteen electric weaving looms; he and his wife operate all of them. He now has two subcontracts, one with Kim, and another with a garment exporter in Taegu City.

CASE 3: JI-YONG SONG, OWNER OF THE POONG YONG WEAVING FACTORY. Song is thirty-six years old and has been operating his weaving factory since 1993. He succeeded his father, who was seventy-three years old that year and had operated the factory since 1950. He employs twenty-two workers to produce polyester cloth. Song joined the factory in 1983 when he finished three years of military service. Before his military service, he studied textile design for two years in a community college. Because his father operated the weaving factory for more than forty years, Song had begun learning the weaving business in childhood. He did not need much time to learn the management of the weaving business. Nevertheless, his father required him to work in the factory as an employee for ten years to learn techniques and skills related to weaving, as well as skills related to labor management, procurement of raw materials, and marketing his products.

His father had produced polyester cloth on advance-order contracts with a textile wholesaler in Seoul, but the wholesaler went bankrupt in 1980, and his father had to switch from advance-order contracts to the putting-out system. He now operates his factory on putting-out contracts from a textile exporter in Taegu.

The Role of Government in the Development of Punggi's Weaving Industry

In the Punggi study area, there was little government support aimed at promoting rural industry before 1989. By the end of the 1980s, the only support the central government provided to the weaving factories was in the form of institutional loans. These government supports were intended to assist the weaving enterprises in replacing their old-style, inefficient weaving machines with new ones, but fewer than 20 percent of the weaving enterprises received these loans, because most weaving enterprises did not have the collateral required for loans provided by local banks.

The land zoning policy of the government was too conservative and has worked as a substantial barrier to the development of the weaving industry. Until the mid-1980s, all the weaving enterprises had located in residential areas, where manufacturing activities were prohibited by law. In other words, all the weaving enterprises in the Punggi area had been violating the law. As a result, they were always uncertain about their future because they were afraid the government might stop their manufacturing activities.

Local weaving manufacturers repeatedly asked the government to change the residential area into an industrial area or to provide a new industrial area. It was hard for the government to change the whole township into an industrial area because many residents who did not operate weaving enterprises did not want their residential area to become industrial. At the same time, designating a new industrial site and developing an industrial estate would have been difficult for the government because most of the land suitable for industrial purposes in the vicinity of Punggi township was prime farmland. It was not an accepted practice in Korea until the late 1980s to change prime farm land into industrial sites.

When the government enacted the Farm Household Income Source Development Act in 1983, the local weaving manufacturers decided to ask the central government to construct an industrial estate in the Punggi area. Their proposal was accepted by the government, and 1,267 million won (US$1.6 million) was subsidized by the central government to construct the industrial estate. Government support provided about 34 percent of total investment, which included land procurement, construction, and infrastructure development. Following the government decision, the Bonghyun Rural Industrial Estate was constructed at the end of 1989, and twenty-four weaving enterprises moved into this estate together with another two enterprises from an urban area.

Special loans were provided to the enterprises for their investment. Each enterprise could receive a maximum of 500 million won (US$632,000) for its physical investment. The interest rate for these loans was 7.5 percent yearly, with the condition of a ten-year repayment period and a grace period of five years. In addition, each enterprise was eligible to borrow a maximum of 200 million won (US$253,000) in operating funds. The interest rate for these loans was also 7.5 percent yearly, with a three-year repayment period, including a one-year grace period.

The policy of establishing rural industrial estates played a critical role in transforming Punggi's weaving industry from a cottage industry to modern factories. It should be noted, however, that the privileges provided to the Punggi estate were available for all enterprises established in rural industrial estates in many other places, but they were not always as successful as they were in Punggi's case. For example, two industrial estates were designated by the government in the neighboring county and city: Gahung Industrial Estate in YoungJoo City, and Bonghwa Industrial Estate in Bonghwa County (table 8-13). Nevertheless, 35 and 40 percent of the total enterprises in the Gahung and Bonghwa estates, respectively, went bankrupt, while only 8 percent (just two enterprises) went bankrupt in the Bonghyun estate.

Moreover, it did not take much time—eighteen months—for all factories to begin operation in the Bonghyun Industrial Estate. Two firms in the Gahung estate and five firms in the Bonghwa estate did not start construction until February 1995.

There may be several reasons that the Bonghyun Rural Industrial Estate has been so successful compared with the other two rural industrial estates. The most important factor was that most enterprises established in the Bonghyun estate were owned by local entrepreneurs, while the enterprises of the Gahung and Bongwha estates were mostly transplanted enterprises of urban origin.

Table 8-13. Number of Firms Operating in the Three Rural Industrial Estates, end of 1994

Item	*Name of industrial estate*		
	Bonghyun (Youngpoong)	*Gahung (Youngjoo)*	*Bongwha (Bongwha)*
Size (*pyung*)[a]	32,000	33,000	45,000
Construction year	1989	1992	1993
Price of industrial estate (won/*pyung*)	90,000	78,000	66,000
Number of firms initially accepted to locate (A)	26	17	15
Number of firms bankrupted (B)	2	6	6
B/A (percent)	7.7	35.3	40.0

a. One *pyung* equals to 3.3 m^2.
Source: Authors' data.

According to Lloyd and Mason (1985: 71), local entrepreneurs have substantial advantages. Entrepreneurs who start their own businesses usually encounter a lot of risk and uncertainty, and they are likely to face serious difficulty in adapting to a new environment if they establish their enterprises in an unfamiliar place (Kim and Cha 1994). The enterprises that moved to the Gahung and Bonghwa estates from urban areas faced many unanticipated problems, including difficulty in acquiring qualified and reliable workers, problems in marketing their products, and difficulty in adapting to the rural area. In contrast, the local entrepreneurs of Bonghyun estate did not have to make a new effort to acquire reliable workers and marketing channels, and they could gain support and cooperation from the local community because they had long, personal relationships with the community. It is worthwhile to note that even in the Bonghyun estate, the two firms moved from urban areas went bankrupt.

In labor management, the enterprises of local origin in the Bonghyun estate have a significant advantage over those of the other two rural industrial estates. In Bonghyun estate, a weaving factory usually has a residential quarter within the compound for the owner's family. Because the factory owner is a local person, he can live within the factory and manage the business very efficiently. In the two other rural industrial estates, most of the factory owners live in urban areas and only occasionally visit the factories. Labor management cannot be performed as efficiently as in the case of Bonghyun estate under these circumstances.

Conclusions

Although Korea has accomplished successful industrial development, it is far behind in rural industrial development compared with Japan and Taiwan, China. As a result, explosive population growth has taken place in a few large city areas, while the population has fallen drastically in many rural areas. A basic question is raised: why has rural industry

been so underdeveloped in Korea, while Japan and Taiwan, China, have achieved successful rural industrialization in the process of economic development?

As implied by Punggi's success in the 1950s, the initial conditions should be considered a basic factor. For the initial stages of industrialization, Korea inherited a very poor entrepreneurial base in rural areas because of its long history of a strong central political system and Confucianism. Moreover, the poor industrial base was almost completely destroyed by the Korean War.

Because the initial conditions of industrialization were so poor, the Korean government adopted a strong industrial policy biased toward the strategic urban sector. As a result, very little room was left in the government program for the development of small rural enterprises. It should be noted, however, that the Korean government has made efforts to develop rural industry since the end of the 1960s through the Farm Household Side-Business Program, the Agricultural and Fishery Development Corporation Project, the Saemaul Factory Program, and the Rural Industrial Estate Program.

These efforts, however, were misdirected, and made things worse. First, government efforts were made to provide direct incentives to rural enterprises to create individual successes, and the preconditions for industrial development in rural areas such as transportation facilities, electrification, and a credit market were neglected. As a result, poor infrastructural conditions prevailed until the end of the 1970s, which created difficulties for rural enterprises, as illustrated in the case of Punggi. That is, Punggi's contraction in the 1960s and its recovery in the 1970s were mostly the result of an infrastructural condition—electrification.

Second, government support was directed to transplanting urban enterprises to rural areas and neglected the importance of rural entrepreneurs rooted in rural communities. Government provided subsidies, generous credit, and tax exemptions or reductions in order to attract urban enterprises to rural areas. Transplanted enterprises, however, failed to adapt to the new environment in rural areas, as shown in the case of Punggi and neighboring rural industrial estates.

Third, government concern was only directed at the physical dimension of rural industry and ignored the importance of institutional and entrepreneurial development. As shown in the case of Punggi's success, a marketing system, organized by various forms of contracts to establish links in the marketing chain, is essential for the success of rural small industry. The marketing system organized by subcontractors not only links the marketing chain but also generates new entrepreneurs. The subcontracting system is made workable by personal ties and mutual credibility, and, as shown in Punggi's case, by the existence of many small enterprises and a subcontracting system to provide rural employees with the chance to learn business management and to become new entrepreneurs through the process of patron-client relationships with previous employers.

The policy implications for rural industrialization derived from this analysis are as follows. First, government efforts should be made to improve infrastructure, and not to provide direct incentives to rural enterprises to create individual successes. Second, government policy should be directed to rural entrepreneurs rooted in rural communities, and not to

transplanting urban entrepreneurs to rural sites. Third, government should focus on the development of institutions and entrepreneurship, not only on the physical side of building rural industry.

How to promote the development of institutions and entrepreneurship in rural areas remains a critical question. Nevertheless, here is a caveat: any intention of the government and/or an organization supported by the government to try to act as a marketing agent by itself will be risky and is likely to end in failure, as shown in the Agriculture and Fishery Development Cooperation Project.

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9

Political Bases of Rural Industrialization:
Korea and Taiwan, China

David W. Lane

This chapter illustrates the importance of the political system in shaping economic organization and development by offering a political explanation for the divergent patterns of rural industrialization in Taiwan, China, and the Republic of Korea. Just as relational contracting between economic actors spreads risk and reduces transaction costs in imperfect markets (see Hayami, in this volume), so too can analogous exchange between political and economic actors reduce investment costs and promote rural entrepreneurship. The extent to which power is decentralized influences the emergence of rural entrepreneurship by offsetting pressures for concentrated urban industry and vertical integration. This occurs when politics is structured to allow local politicians discretionary influence over policy implementation and government resources. Incentives for politicians to seek local—especially electoral—support prompt efforts to extract resources for their constituents, easing the pressures of a discriminatory policy environment for small rural industrialists whose access to, and influence on, central policy formulation is otherwise limited. As a result, for small industrialists seeking working and investment capital under conditions of credit rationing and capital scarcity, cognizance of political factors helps predict business behavior.

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As will be shown below, aside from rural policy and at cross-purposes to financial policy, state, and particularly electoral, structure can influence the survival strategies of small businesses, tying clientelist social norms or authority patterns to political resources for economic ends and reinforcing patterns of business organization and the political status quo. Entrepreneurs seeking the cheapest effective self-help strategy[3]—in this case, to obtain financing—can choose between maximizing under existing constraints (economic strategies), trying to alter those constraints (political strategies), or market exit. Subcontracting and borrowing on informal credit markets are examples of economic self-help strategies; voting, bribery, lobbying, and clientelism are examples of political strategies; and bankruptcy and offshore production are examples of market exit. Because government regulation and tolerance for these survival strategies affects their cost to the small firm, the political structures institutionalizing these costs in Taiwan, China, and Korea will prompt cross-country variance in the strategies entrepreneurs choose to adopt.

The patterns of individual or collective self-help selected by small firms on the basis of these politically imposed costs help to explain the varying patterns of business organization. The evidence shows that in Taiwan, China, state and electoral structure leaves room for political agents to capture state resources for local economic benefit, but that in Korea, the centralization of economic and political power works to deny opportunities for political and economic entrepreneurship to local businessowners. The lesson is that political structure can create economic externalities. To the extent that political structure is a function of choice rather than necessity, therefore, the evidence here suggests that political organization and political rules can be shaped consciously to affect economic outcomes.

The Puzzle of Rural Industrialization in Taiwan, China, and Korea

Divergence in the industrial structures of Korea and Taiwan, China, is anomalous in light of the countries' many commonalities. Despite precolonial differences, at approximately the same time over most of the twentieth century, Korea and Taiwan, China, have shared similar resource endowments, colonial experiences, external security threats and trading opportunities, initial economic conditions, development paths, and even development policies. Even so, each has followed a different path to industrial growth.

Korea's industry is concentrated in urban areas and is dominated by diversified, vertically integrated conglomerates. Table 9-1 shows that just over half of Korea's small and medium-size manufacturers are located in the six largest cities. If the small industrial establishments of Kyonggi Province are included in this group—Kyonggi being the province in which the capital, Seoul, and its port, Inchon, are located—then a whopping 78 percent of Korea's small industry can be classified as urban. Indeed, Jong-Gie Kim (1991: 3) states that "between 1971 and 1988, the proportion of manufacturing firms located in urban areas rose from 54.4 to 75.6 percent," suggesting that the inclusion of provincial territory within urban boundaries is entirely appropriate.[4] Kim (1991: 3–4) continues:

In 1970, 17.8% of rural manufacturing firms were located in South Cholla province, 15.5% in Kyonggi province, and 15.1% in South Chungchong province. However, by 1980, while almost all other provinces experienced a decline in their share of manufacturing firms . . . Kyonggi . . . increased its share to more than 30%. During the same period, rural manufacturing employment in . . . Kyonggi province increased more than four times and now accounts for 40.9% of the nation's manufacturing employment. Other provinces experienced lower growth rates in manufacturing or no growth at all both in terms of employment and number of firms.

Table 9-1. Small and Medium-Size Manufacturers by Location: Korea and Taiwan, China, 1990

	Korea			*Taiwan, China*	
	Number	*Percent*		*Number*	*Percent*
Total	67,679	100	Total	155,263	100
Cities	35,095	51.9	Cities	28,611	18.4
Seoul	17,379	25.6	Taibei	9,591	6.1
Pusan	6,909	10.2	Gaoxiong	3,678	2.3
Taegu	4,778	7.0	Jilong	832	0.5
Inchon	4,270	6.4	Xinzhu	4,308	2.7
Kwangju	787	1.1	Taizhong	8,392	5.4
Taejon	972	1.4	Jiayi	1,810	1.1
Tainan	7,582	4.8			
Provinces	32,584	48.1	Counties	119,126	76.7
Kyonggi	17,853	26.3	Taibei	33,393	21.5
Kangwon	1,041	1.5	Taizhong	23,414	15.0
N. Chungchong	1,043	1.5	Zhanghua	17,369	11.1
S. Chungchong	1,600	2.3	Taoyuan	9,134	5.8
N. Cholla	1,876	2.7	Tainan	8,635	5.5
S. Cholla	1,832	2.7	Gaoxiong	5,322	3.4
N. Kyungsang	3,073	4.5	Miaoli	4,070	2.6
S. Kyungsang	4,041	5.9	Ilan	2,908	1.8
Cheju	225	0.3	Jiayi	2,715	1.7
Nantou	2,647	1.7			
Pingdong	2,539	1.6			
Yunlin	2,284	1.4			
Xinzhu	2,258	1.4			
Hualian	1,351	0.8			
Taidong	562	0.3			
Penghu	525	0.3			

Source: Korea Small and Medium Industry Promotion Corporation, *Major Statistics of Small and Medium Industries*, 1994. Taiwan Ministry of Economic Affairs, Small and Medium-sized Enterprise Agency, *White Paper on Small and Medium-sized Enterprise (Zhongxiao qiye baipishu)*, 1991.

Ho (1982: 980) extends the argument further:

> Between 1958 and 1975, there was a more than three-fold increase (from 109,000 to 369,000) in rural factory employment, but the relative share of rural factory employment in total factory employment declined from 42 to 26%. It should be noted that the increase in rural factory employment is probably biased upward because included in "rural" is Taegu, one of Korea's most rapidly expanding cities in the 1960s and 1970s.

In contrast, the industry of Taiwan, China, is smaller in scale, and its firms are far more numerous and more evenly distributed between rural and urban locations. Table 9-1 shows that less than one-fifth of Taiwan's small and medium-size manufacturers are located within the largest cities. Once again, however, counties adjacent to Taiwan's major cities may be considered urban when their enterprises gain from proximity to large contractors and the urban marketplace. If Taibei and Taizhong Counties are tallied with the cities, about 55 percent of Taiwan's small industry can be considered urban-based. Lack of data classified both by firm size and precise location makes accurate appraisal difficult, but Amsden (1991: 1130, 1132) shows that industrial employment rose most between 1966 and 1986 in the rural regions abutting Taiwan's metropolitan areas. Over these two decades, this "suburban" employment rose by a factor of nearly seven, compared with that in rural areas of almost five, and urban growth of only three.

Evidence from farm household income surveys buttresses the view that Korea's rural industry is unusually quiescent. Data in table 9-2 show that the overwhelming majority of Korean farm incomes remain farm-based despite the structural transformation of the economy as a whole into industry and services. Taiwanese farmers, however, to say nothing of their Japanese counterparts, obtain most of their income from wages, salaries, and other nonfarm business.

Many Koreans have quit the countryside altogether for urban employment: table 9-3 shows that population in the six largest cities alone has doubled every two decades, while that in the rest of the country stayed flat.[5] Figure 9-1 shows that despite the industrial deepening of the 1970s, Taiwan, China, remains less urbanized than Korea. Taipei, like Seoul in Korea, is the seat of central government and the center of Taiwan's business, finance, medicine, publishing, and education activities. Yet only about one-tenth of Taiwan's 20 million people live in the capital, compared with the one-quarter of Korea's 40 million people who live in Seoul.

Two hypotheses have been advanced to explain the spatially dispersed industry of Taiwan, China, relative to Korea. The first argues that Taiwan's agricultural sector, both under Japanese occupation and since, was healthier, more advanced, and more diverse than Korea's, and therefore produced more surplus to invest in alternative undertakings. Taiwan processed sugar, fruit, and vegetables in the countryside from an early date, thereby providing impetus for rural commercial and support activities (Ho 1982: 982–83). Conversely, Korea was basically a rice monoculture economy until the state's attempts in the mid-1960s to diversify crops and stabilize commodity prices through the Agriculture and

Table 9-2. Composition of Farm Household Income: Korea, Taiwan (China), and Japan (percent)

	Agricultural income	*Nonagricultural income*			
		Total	*Wages*	*Side business*	*Other*
1962					
Korea	79.6	20.4	9.4	3.8	7.2
Japan	51.4	48.6	35.7	9.4	3.5
1965					
Korea	79.2	20.8	8.9	3.5	8.4
Taiwan, China	66.0	34.0	20.1	3.8	11.1
Japan	48.0	52.0	41.4	7.0	3.6
1970					
Korea	75.9	24.1	10.4	3.8	9.9
Taiwan, China	48.7	51.3	36.0	2.7	12.6
Japan	36.5	63.5	52.8	6.9	3.8
1975					
Korea	81.9	18.1	9.4	2.5	6.2
Taiwan, China	48.1	51.9	37.3	3.5	11.1
Japan	31.3	68.7	—	—	—
1980					
Korea	65.2	34.8	14.5	2.5	17.8
Taiwan, China	26.4	73.6	52.2	6.2	15.2
Japan	20.0	80.0	—	—	—
1985					
Korea	64.5	35.5	13.8	3.7	18.0
Taiwan, China	24.8	75.2	—	—	—
Japan	19.4	80.6	69.5	8.3	2.8
1987					
Korea	61.4	38.5	14.7	4.3	19.5
Taiwan, China	22.0	78.0	—	—	—
Japan	16.5	83.5	71.9	9.8	1.8

Note: Data for Taiwan, China, and Japan are from 1966 and 1974 rather than 1965 and 1975; 1987 data for Taiwan, China, and Japan are from 1989 and 1988 respectively.

Source: Korea: Ministry of Agriculture and Fisheries, various years. *Report on the Results of the Farm Household Survey;* Taiwan, China: Council for Agricultural Planning and Development. 1982. *Basic Agricultural Statistics;* Japan: Ministry of Agriculture, Forestry, and Fisheries. nd. *Pocket Agriculture Statistics,* cited in Jong-Gie Kim (1991: 8–9).

Fisheries Development Corporation (AFDC). The AFDC financed and oversaw construction of cold-storage facilities and processing plants in the face of incentives making moneylending more profitable to rural entrepreneurs than direct investment in productive capacity.[6]

Little systematic evidence has been gathered to test this proposition, but its positive implications for Taiwan, China, may be tempered by the evidence noted below that agri-

Table 9-3. Population by Location, Korea and Taiwan, China, 1960–92

	Population by area, Taiwan, China							
	1992	*1990*	*1985*	*1980*	*1975*	*1970*	*1965*	*1958*
Total	20,752,494	20,352,966	19,258,053	17,805,069	16,149,702	14,675,964	12,483,193	9,691,378
Cities	6,542,459	6,486,377	6,034,400	4,944,645	4,454,026	3,844,774	2,773,994	1,842,164
Taibei	2,696,073	2,719,659	2,507,620	2,220,429	2,043,318	1,769,568	1,135,500	718,237
Gaoxiong	1,405,909	1,386,723	1,302,849	1,202,123	998,919	828,191	596,092	377,446
Jilong	359,482	352,919	351,524	344,867	341,383	324,040	278,320	190,810
Xinzhu	332,707	324,426	304,010					
Taizhong	794,960	761,802	674,936	593,427	546,838	448,140	364,262	256,088
Jiayi	258,698	257,597	253,573					
Tainan	694,630	683,251	639,888	583,799	523,568	474,835	399,820	299,583
Counties	14,210,035	13,866,589	13,223,653	12,860,424	11,695,676	10,831,190	9,709,199	7,849,214
Taibei	3,162,346	3,048,034	2,663,683	2,258,757	1,629,105	1,240,576	1,061,552	725,105
Taizhong	1,317,505	1,258,157	1,142,189	1,013,176	861,606	785,903	688,092	572,050
Zhanghua	1,264,955	1,245,288	1,223,209	1,166,352	1,102,835	1,050,246	978,636	858,985
Taoyuan	1,415,546	1,355,175	1,211,249	1,052,800	861,792	726,750	588,786	442,319
Tainan	1,046,659	1,026,983	1,000,781	962,827	943,075	934,865	873,174	759,016
Gaoxiong	1,146,578	1,119,263	1,076,761	1,000,645	943,650	830,661	712,201	565,075
Miaoli	553,557	547,609	550,343	542,745	538,820	524,744	479,685	406,285
Ilan	456,857	450,943	449,981	442,988	427,655	412,787	378,881	325,447
Jiayi	556,580	552,277	569,932	825,967	840,664	849,914	793,110	672,715
Nantou	542,396	536,479	535,572	524,245	517,927	511,040	467,526	384,346
Pingdong	901,491	893,282	901,981	888,270	857,089	828,761	744,111	559,010
Yunlin	753,841	753,639	791,186	796,276	801,422	800,578	749,416	644,979
Xinzhu	385,668	374,492	366,566	641,937	617,311	587,652	525,008	431,218
Hualian	355,609	352,233	361,549	355,178	346,914	335,799	298,663	229,440
Taidong	255,362	256,803	276,389	281,218	291,111	291,761	260,322	182,379
Penghu	95,085	95,932	102,282	107,043	114,700	119,153	110,036	90,845

cultural surplus was often extracted from the countryside, first by the Japanese during the colonial period (Gold 1988: 104–109), and later by the Nationalist government. Furthermore, the value of Taiwan's food and processed agricultural exports fell sharply throughout the 1960s, from 67 percent of total exports in 1960 to barely 20 percent by 1970 and to under 10 percent in 1980. Agriculture's share of the net national product also traces a downward slope, from 33 percent in 1960 to 18 percent in 1970 and 9 percent in 1980 (CEPD 1988: 41, 213). Thus, while Taiwan's agricultural surplus may have been an important source of investable funds for rural industry in the 1960s, and was certainly more important than Korean agriculture in this respect at that time, the role of agricultural surplus inevitably waned thereafter with its ebbing absolute volume, and with it went most of its impact on the emergence of rural entrepreneurship.

The second and more important hypothesis is that the high quality and early installation of physical infrastructure made rural industrialization possible in Taiwan, China, but

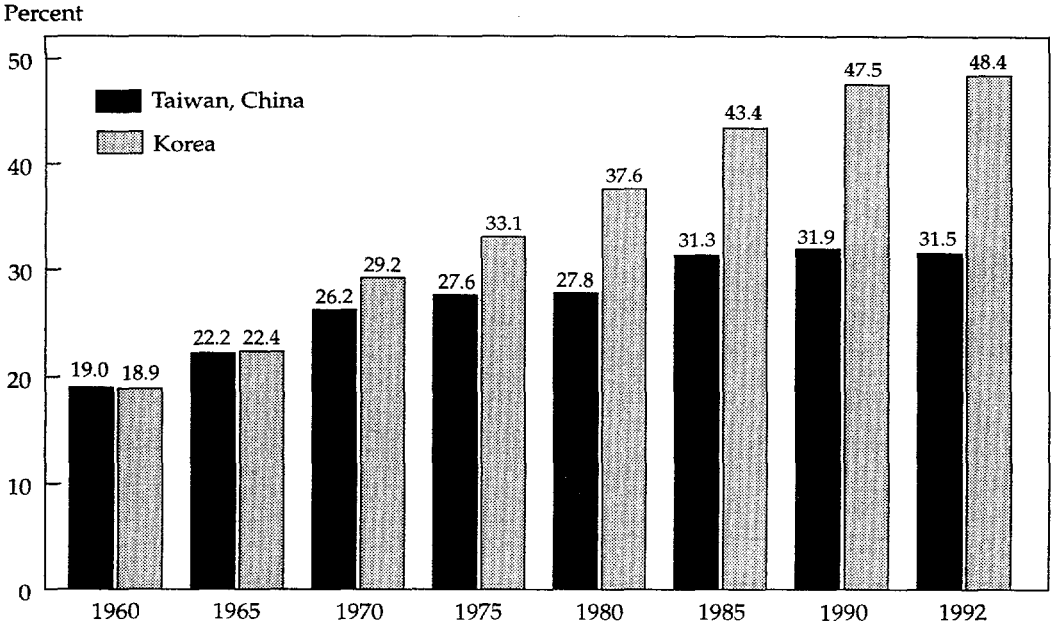
	Population by area, Korea							
	1992	*1990*	*1985*	*1980*	*1975*	*1970*	*1965*	*1960*
Total	44,563,318	43,471,628	42,220,980	41,503,762	37,931,617	33,926,536	30,588,956	27,727,606
Cities	21,573,682	20,664,428	18,343,496	15,592,254	12,567,186	9,902,374	6,860,628	5,235,634
Seoul	10,969,862	10,612,577	9,639,110	8,364,379	6,889,502	5,433,198	3,470,880	2,445,402
Pusan	3,887,278	3,798,113	3,514,798	3,159,766	2,453,173	1,842,259	1,419,808	1,163,671
Taegu	2,286,305	2,229,040	2,029,853	1,604,934	1,310,768	1,063,553	811,406	676,692
Inchon	2,070,616	1,817,919	1,386,911	1,083,906	799,982	646,013	485,511	402,009
Kwangju	1,134,843	1,062,084	866,695	651,642	506,703	414,598	307,412	229,393
Taejon	1,224,778	1,144,695	906,129	727,627	607,058	502,753	365,611	318,467
Provinces	22,989,636	22,807,200	23,877,484	25,911,508	25,364,431	24,024,162	23,728,328	22,491,972
Kyonggi	6,619,629	6,155,632	4,794,135	4,933,862	4,039,885	3,358,105	2,984,374	2,721,630
Kangwon	1,555,082	1,580,430	1,724,809	1,790,954	1,862,107	1,866,928	1,771,035	1,636,726
N. Chung-chong	1,403,633	1,414,295	1,391,004	1,424,083	1,522,203	1,453,899	1,550,475	1,369,313
S. Chung-chong	1,872,095	2,027,766	3,001,572	2,955,999	2,948,649	2,860,690	2,899,838	2,525,646
N. Kyong-sang	2,873,336	2,865,676	3,010,001	4,954,559	4,858,551	4,559,092	4,479,614	3,848,424
S. Kyong-sang	3,846,825	3,671,509	3,516,660	3,322,132	3,280,052	3,119,669	3,176,401	4,182,042
N. Cholla	2,028,956	2,069,848	2,202,243	2,287,689	2,456,403	2,434,522	2,516,528	2,373,487
S. Cholla	2,283,858	2,507,439	3,748,484	3,779,475	3,984,849	4,005,735	4,013,011	3,553,041
Cheju	506,222	514,605	488,576	462,755	411,732	365,522	337,052	281,663

Source: 1958: Taiwan Provincial Government, Department of Civil Affairs (Taiwan shengzhengfu minzhengting): *Household Registration Statistics of Taiwan (Taiwansheng huji tongji yaolan)*, 1965: *Monthly Bulletin of Population Registration Statistics of Taiwan, ROC (Zhonghua minguo Taiwansheng huji tongji yuebao)*, 1970: *Taiwan Demography Monthly (Zhonghua minguo Taiwan renkou tongji yuekan)*, 1975–92: Taiwan, Ministry of the Interior (Zhonghua minguo neizhengbu). *Taiwan Demography Quarterly, ROC (Zhonghua minguo Taiwan renkou tongji jikan)*. Korea Institute of Urban Administration, *National Statistical Yearbook* (Hanguk toshi hengchongyunguso, Chonguk tongkye yeonkam), 1994.

its absence in Korea afforded fewer opportunities for rural entrepreneurs to prosper. The data on paved roads and electrification offer powerful evidence for this contention. According to Ho (1982: 983):

> The density of paved highway and feeder roads in Taiwan was 76.4 kilometers per thousand square kilometers in 1962 and 214.5 kilometers per thousand square kilometers in 1972. . . . In 1960, the density of paved road in Korea was below 10 kilometers per thousand square kilometers and only 6.4 kilometers per thousand square kilometers if city roads were excluded, and much of this roadway was in the Seoul area where the density of paved road was about three times the national average.

Figure 9-1. Urban to Total Population, Korea and Taiwan, China



Taiwan, China, cities: Taipei; Gaoxiong; Jilong; Taizhong; Tainan; and, for 1985–92, Xinzhu and Jiayi.
Korea cities: Seoul, Pusan, Taegu, Inchon, Kwangju, and Taejon.

> Even in 1975, after Korea had built a national highway grid, its paved road density (excluding city roads) was still below 50 kilometers per thousand square kilometers, a level reached in Taiwan in the late 1950s.

The absence of paved rural roads in Korea offered few advantages to rural entrepreneurs. Lacking significant wage or productivity differentials to drive urban agents to seek rural labor and subcontracting, poor Korean infrastructure encouraged entrepreneurs and subcontractors to set up shop in close proximity to their urban-based customers rather than assume the heavy inventory, transportation, and information costs necessitated by a rural location. Conversely, physical infrastructure in Taiwan, China, created trading links to urban markets, facilitating rural entrepreneurship and rural-urban interaction.

The case of rural electrification presents a similar contrast. By 1960, Ho states, 70 percent of farm households in Taiwan, China, received electricity, compared with a mere 13 percent of Korean households in 1964, most of these in Kyonggi Province surrounding Seoul (1982: 983–84). Early rural electrification in Taiwan, by providing an important resource to industry, surely favored local development over urban industrial concentration. Wade (1990: 268), among others, claims that this was the state's intent from the beginning. Overcapacity was built into the system in the expectation that rural industry would arise

to exploit it. Ranis (1979: 215) notes that government attempted to charge rural and urban users equal rates for electricity, or at least tried to avoid subsidizing either group.

Provision of physical infrastructure to rural areas is a necessary but not sufficient condition for rural entrepreneurship. Local, independent entrepreneurship will not bring about rural industrialization absent the physical infrastructure making cost-effective production and urban linkage possible. Rural producers require urban markets or their agents for information-gathering, production inputs, and sales, as well as urban services for international trade. Hence, Taiwan, China, was advantaged over Korea by its early superiority in rural infrastructure, and perhaps by its diversified rural economy as well. Yet the presence of a favorable physical environment does not, in itself, ensure sustained entrepreneurship and industrialization. Moreover, while Korea's infrastructural development has since been converging with that of Taiwan, its rural industrialization has not. Continued divergence between Korea and Taiwan in rural industrial vitality suggests either that physical infrastructure plays a more limited role than their comparison otherwise implies, or that Taiwan's gains from infrastructure came early as a once-and-for-all boost. Both conjectures point to the need for a better account of the incentives affecting the mobilization and persistence of rural entrepreneurship.

Policy Incentives and Politics

Aside from the advantages of Taiwan, China, in infrastructure and agricultural diversity, political variables also work to favor Taiwan over Korea in rural entrepreneurship and industry. Political variables take many forms, with diverse effects. Political decisions alter factor prices and create rents. Political criteria also prompt the provision of infrastructure, and even migratory pressures, and thus merit examination for their systemic economic impact.[7] This section discusses some economic effects of political variables in Korea and Taiwan, ranging from direct policy intervention to less obvious, but no less meaningful, political influences on entrepreneurial decisionmaking.

Rural Policy

Rural policy is the most straightforward political link to rural industrial development. Yet although we intuitively expect new resources to spur growth, several state efforts to create rural industry in Korea have produced few of the hoped-for results.[8] One such program, begun in 1967, tried to combine readily available local labor and raw materials with loans and tax incentives to create a rural handicrafts sector. Partly because handicrafts offer few linkages to other industries and are neither an intermediate input nor an essential consumer item, the program added little significant value to local labor.

The Saemaul Factory Program was a more successful attempt to encourage local industrialization, this time through generous incentives to relocate or expand factories in small townships to process local raw materials.[9] Although received well in local areas,

the unavailability of skilled labor, ancillary services, and adequate physical infrastructure hobbled many of the factories that moved from urban areas to the countryside. Profitable Saemaul factories remained so partly because of their proximity to urban markets and industry (Kim 1991: 14):

> Almost 75% of the *Saemaul* factories in operation are concentrated in the provinces of Kyonggi, and North and South Kyongsang, and most of them [are located] near the major metropolitan areas of Seoul, Pusan, and Taegu.

Indeed, one source argued forcefully that much money was wasted on the Saemaul program precisely because political concerns prompted a balanced distribution of funds by region rather than according to the economic potential of site-specific investment.[10] Current rural industrialization efforts build on the lessons learned from previous mistakes, but rather than improve rural conditions, they perpetuate the urbanization of industry and the migration of the past by establishing industrial estates in existing rural centers deemed capable of providing the requisite labor and infrastructure. Korea's rural development policy limits its own effectiveness by continuing to seek and create individual successes directly and from scratch, rather than indirectly through broad incentives that appeal to the self-interest of the whole stratum of potential rural entrepreneurs.

The effects of Taiwan, China's, rural policy on local industrialization are also limited. Apart from constructing physical infrastructure and conducting land reform—which generally failed to transform dispossessed landlords into industrialists[11]—government did little to encourage rural industry directly. Although Kuo (1983: 23–29) suggests that land reform aided industrialization by promoting the cultivation of cash crops for potential processing, the contributions of agriculture to industry should not be overstated. Capital outflow from agriculture ended by 1970 (Yager 1988: 254–55), while Taiwan has continued its rapid growth apace. Moreover, Taiwan's reliance on large-scale public enterprise and the use of the postal savings system and grain procurement policy to withdraw agricultural surplus from the countryside for long-term industrial and infrastructure investment suggests that Taiwan's authorities placed a low priority on balanced rural development through local entrepreneurship.[12] Small-industry policy in Taiwan took on distinct shape only with the creation of targeted financial programs and technical assistance centers in the early 1970s, but these were not specifically rural-based.

The problems of rural policy in Korea and its low profile in Taiwan, China, suggest that this most direct of policy measures has been largely irrelevant to local industrialization. Other political variables, however, have played significant roles.

Policy Incentives

Intentionally or not, both targeted and macro-level policies often produce incentives that affect a wide range of other actors and outcomes. Tax regulations, for example, although aimed at raising revenue without hindering growth, regularly create perverse economic

incentives instead. Thus Taiwanese (China) businessowners form broad networks of small companies, ultimately controlled by an individual or a very small coterie of intimates, which as a group successfully avoid taxation by virtue of their inconspicuous size. The same corporate resources, integrated as a single conglomerate, would quickly draw unwelcome official attention.[13] Patterns of policy enforcement also produce economic incentives: lax enforcement of tax laws in Taiwan and Japan is a noted tacit form of government support for small business.[14]

Regulatory policy also affects the transaction costs of economic exchange. Given constraints on the availability of working capital in Taiwan, China, for example, there is a broad-based market in postdated checks as a substitute for formal credit facilities and commercial paper. While the Taiwanese are not alone in using the postdated check as an informal credit instrument, government policy toward curb market financing there presents a notable contrast to repeated Korean efforts to stamp out informal lending. In a tacit admission of the inadequacies of the state-operated banking system, until 1974 Taiwan's government permitted postdated checks to be cashed prior to maturity (Caldwell 1976: 740), not only spurring their use but also improving efficiency in the otherwise fragmented curb market by creating a secondary market in discounted checks. More important, until its repeal in mid-1987, was a statute that made passing bad checks a criminal offense and allowed the attachment of a borrower's assets to recover losses. By contrast, dishonoring a promissory note or trade bill carried only civil penalties (Caldwell 1976: 739). Although conclusive studies are lacking, one may reasonably infer that in the absence of legal enforcement mechanisms, the cost of discounting and transacting with postdated checks rose significantly. Indeed, the government hoped the increased risk of transacting after the statute's repeal would force these unregulated money flows into the formal sector (Winn 1986).

The Korean government, in contrast, has attempted on several occasions to eliminate the curb market by discouraging potential creditors rather than by satisfying unmet demand. A 1972 presidential decree dissolved the curb market by fiat, but its effects were only temporary (Cole and Park 1983: 158–68; Clifford 1994: 102–04). Vested interests repelled attempts to eliminate false-name bank accounts (one means for curb market creditors to stockpile cash) until President Kim Young Sam's successful initiative in 1993.

State and Electoral Structure

Beyond the indirect effects of individual policies, however, broad political institutions can influence economic entrepreneurship. The extent of decentralization of political influence has a particularly strong affect on the prosperity of small entrepreneurs. Embedded in state organization are rules and norms governing, among other things, the extent to which lobbying is tolerated and the channels for its expression. These institutions are located in disparate areas, ranging from legislative procedure to electoral rules, from the power of the executive branch to factionalism in the governing political party. The argument pre-

sented (but not tested) here is that these institutional differences in state structure affect the costs of self-help strategies to economic entrepreneurs, and therefore the choice of political and economic strategies that firms are likely to pursue.

As applied to the question of rural industrialization in Korea and Taiwan, China, the argument focuses on the varying extent of decentralization of political influence in the two otherwise similarly authoritarian political regimes. Despite the shared inability of rural entrepreneurs in each system to directly influence policy formulation at the central government level, and in the face of financial policies exacerbating the normally discriminatory borrowing environment, small firms in Taiwan, especially rural-based firms, are able to use the electoral dynamic locally in a compensatory way to ease the constraints on investment and operating capital. In the absence of similar mechanisms in Korea, rural entrepreneurs there are forced to rely on costly economic survival strategies such as informal borrowing or, when available, subcontracting. The following section illustrates the argument for Korea and Taiwan, with brief comparative mention of Japan as well.

Financing Small Industry

Among the most powerful policy tools available to officials in postwar Korea; Taiwan, China; and Japan has been influence over the financial system and credit allocation (Cole and Park 1983; Johnson 1982; Wade 1985, 1990; Woo 1991). Until recently, interest rates were fixed and banks and credit markets were highly segmented in all three systems. Indirect financing (bank loans) predominated and capital markets were left weak. Government policy was to aggregate funds from small savers and invest them in building large-scale industry. Post offices offered savings accounts bearing above-market effective interest rates, and the deposits were reinvested by government. According to one observer, Korea's central bank requires rural bank branches to transfer 70 percent of new deposits out of the countryside to Seoul for reallocation (Jung-Hwan Lee and Chong-Hyuk Suh, in this volume).

For small business, it was critical that banks in Taiwan, China, and Korea were virtually all state-owned, and banking-market entry almost nonexistent, resulting in credit rationing to large and politically well-connected firms and the rise of significant curb markets to serve unmet demand. Even now, for loans to small firms, Taiwan's banks demand collateral of 120 percent or more; Korean banks demand 150 percent.[15] State ownership of Taiwan's banks ensures conservative lending patterns by their civil servant employees, whose prospects depend on minimizing error. Although uncommon in practice, Taiwan's bankers can still be required to recoup loan losses out of personal funds.

Small firms are ordinarily disadvantaged relative to large firms in the freest of markets: their usually vague track records, poor bookkeeping, limited collateral, and relatively small borrowings all make them less reliable and more costly borrowers for the banks than larger firms. The point of the above summary, however, is that development policy in Korea and Taiwan, China, said to favor producers over consumers, increased the costs of investment for smaller producers.

Predicting Small Firm Choice

Despite such policy constraints, small entrepreneurs do not lack adaptive financing options, at least in theory. Individually, they may seek out subcontracting relationships with firms that benefit from government largesse, thereby ensuring occasional access to credit, technology, and a source of stable demand for their products (Yokokura 1984). Some may pursue clientelist strategies with local political representatives or seek favors as part of political support associations. They may express their interests at the ballot box, solicit investment funds from friends and relatives, or go bankrupt. Collectively, firms may organize, locally or nationally, to press for wholesale change in government policy or for compensation for policy-driven losses. Further, entrepreneurs may move outside the bounds of state regulation to form unofficial credit markets or try to extract state resources with the aid of local officials (Oi 1989).

Aside from the organizational costs of collective action,[16] state and electoral structure can influence the calculus of entrepreneurial decision by defining the limits of permissible political participation, the effectiveness of participation, and the cost of ignoring state proscription of political action. For example, two revealing indicators of openness to political participation are the presence and role accorded to voluntary associations and the existence and impact of elections for political representatives. Of no less import are the incentives to politicians to assist small entrepreneurs and their control over the resources to do so.

Focus on the role of local politicians and the electoral process is primary in this instance because of the limits set on collective lobbying by the state. In both postwar Korea and Taiwan, China, for example, state controls over collective political opposition made lobbying of the central government costly and difficult. In Taiwan, associations were illegal without government approval and registration with the appropriate ministry. By law, every economic sector of more than five firms formed an industrial association; the more important associations received both a state-appointed full-time secretary to run them and the oversight of the Nationalist Party's social affairs department (Wade 1990: 271). Korea's attitude toward business associations and voluntary association has differed little, permitting no formal means to articulate, let alone organize behind and act upon, positions conflicting with government policy. The only voluntary associations to survive locally in Taiwan were the traditional clan, fraternal, and temple societies (Rigger 1993: 21), which by default tended to become repositories of communal and political activity (Feuchtwang 1981: 53).

Where political controls on free expression make collective lobbying impossible, rational entrepreneurs may resort to individual political action or to economic alternatives. Yet economic strategies are also costly, and they put rural entrepreneurs at a disadvantage to firms with better access to government, even in cases when that access comes only at a price. At the same time, where political access is readily available and political representation cheap, rational entrepreneurs forgo costly economic coping mechanisms to press their interests in the political arena.

In sum, state structure both constrains and facilitates political action. By placing costs on the self-help alternatives available to businesses, such as collective lobbying, state structure constrains choice. Yet state structure can also provide entrepreneurial opportunity by binding with social structures and institutions to produce (often unintended) positive economic externalities, in this case at the level of local electoral politics.

The evidence that follows shows that as a constraint on entrepreneurship, state structure in both Korea and Taiwan, China, since the 1960s similarly raised the cost of political action and forced local industrialists into costly economic adjustment strategies. By contrast, during the capital-scarce early postwar years in democratic Japan, the constraints of state structure were minimal and small entrepreneurs used the ready access to the political system to press their interests.

In their facilitating effects on entrepreneurship, however, the state structure of Taiwan, China, has offered more to rural entrepreneurs than that of Korea. By centralizing political authority and economic resources in a strong executive branch that monopolizes local political and economic life, the Korean state has nearly eliminated the opportunity-based effects of state structure on local entrepreneurship. In Taiwan, a strong executive branch has left room for electoral competition for local and provincial posts to provide preexisting local political factions and economic interests informal access to state resources for local development. Although not benefiting all rural entrepreneurs, this dynamic has nonetheless spurred local activity, particularly by easing investment and operating costs. Latent entrepreneurship can thus be roused by the opportunities that the specifics of government organization create.

Evidence

In Taiwan, China, small industrialists use the electoral dynamic at the local level to subvert constraints imposed by a centralized state and a powerful ruling political party. Politicians link existing clientelist relations among political factions and economic networks at the local level with opportunities offered by local elections and electoral rules in order to secure a power base for themselves and to serve their constituencies (Wang 1994). Local entrepreneurial impulses are thereby given material support by political agents on the basis of patron-client ties.

This outcome is at odds with the conventional portrait of the distribution of power in Taiwan, China. Most observers rightly conclude that overall political control and the power to formulate and implement policy rests with the ruling Nationalist Party (KMT), whose Leninist organization has thoroughly penetrated government. In practice, power is further concentrated among several dozen top KMT members who influence government operations through their personal as well as institutional power bases.

In organizational terms, however, the government of Taiwan, China, is divided into both a national legislature, whose membership was wholly controlled by the KMT, and a "powerless" provincial legislature, whose membership is chosen by vote. The KMT made this decision partly to maintain the pretense of democracy while under martial law, and

partly to coopt and control local political actors after the KMT's retreat to Taiwan. The creation of an elected provincial assembly provided a platform for the expression and aggregation of local interests. While the KMT long made clear that basic political questions regarding its rule were not open for debate, provincial assemblymen have felt little compunction in seeking personal and constituent benefits from their office (Lerman 1978). As a result, the electoral dynamic at the provincial level has had at least two effects helpful to local businessmen at the expense of KMT policy and economic controls.

First, small industrialists in the early 1970s successfully lobbied members of the provincial assembly to press the party for relief from the debilitating effects of credit rationing. The provincial assembly members prevailed upon the provincial finance commissioner, a high-ranking KMT official, to act. New emphasis was placed on policy for small industry, and several state corporations were established as a result: the Small Business Integrated Assistance Center (1973), the Small and Medium Business Credit Guarantee Fund (1974), and the network of small and medium-size enterprise banks (1975). These either lend directly or reduce the cost to banks of small business loans by lowering transaction costs and informational asymmetries.

Second, and more important, the sole administrative authority of the provincial assembly over Taiwan, China's, three largest commercial banks has resulted in the election to the assembly of local faction bosses who press the banks to lend to local clients on other than strictly economic grounds. Bad loans are lost in a maze of provincial- and central-government-level accounting.[17]

While data are scarce for this informal and illicit, but common, activity, it is possible to depict the financial constraints facing a typical entrepreneur and circumstantial evidence for political exchange. Taking 1986, a year for which a variety of financial data are available, as an example, Taiwan, China's, private firms as a group could borrow only 55 percent of the funds they actually invested from formal financial institutions: 45 percent of their borrowing came from informal sources, including interfirm lending.[18] Small firms received just over one-third of the funds loaned by Taiwan's banks in 1986, even though they accounted for 98 percent of all firms at the time.[19] Moreover, 92 percent of the funds made available to small firms were lent on a short-term basis: less than 3 percent of bank loans to Taiwan's small firms had terms of over one year.[20]

The cost of money was an additional constraint: in 1986, interest on long-term loans from the commercial banks ranged between a floor of 5.50 percent and a ceiling of 10.25 percent; interest on short-term secured loans ranged between 5.00 and 9.50 percent. This published range is somewhat misleading, however. Given the absence of competition from either the bond market (which is minuscule) or informal credit markets (whose rates are much higher; see table 9-4), interest rates charged borrowers by Taiwan, China's, banks are always at the maximum permissible rate, whatever the quality of the credit or the maturity of the loan (Caldwell 1976: 738). If anything, given the normal risks and transaction costs involved, the interest rates charged to small firms in practice are raised further by informal demands for compensating balances. The 1986 interest rate on loans for exports was a uniform 5.50 percent to all, several points lower than short-term secured loans.

Table 9-4. Margins Between Curb Loan Rates and the Secured One-Year Loan Rate, Korea and Taiwan, China

Year	Korea (A)	Taiwan, China (B)	(A) – (B)
1963	38.86		
1964	45.90		
1965	40.42	9.72	30.70
1966	32.68	9.78	22.90
1967	30.52	10.53	19.99
1968	30.24	10.57	19.67
1969	26.86	12.10	14.76
1970	26.16	8.65	17.51
1971	23.44	9.49	13.95
1972	21.30	10.60	10.70
1973	17.74	9.20	8.54
1974	25.06	14.40	10.66
1975	32.38	14.01	18.37
1976	24.37	15.53	8.84
1977	23.07	15.86	7.21
1978	24.60	15.24	9.36
1979		14.46	
1980		14.43	
1981		15.71	
1982		17.53	
1983		16.44	
1984		15.97	
1985		15.46	
1986		13.51	
1987		13.90	
1988		11.87	
1989		11.36	

Source: Korea Small and Medium Industry Promotion Corporation 1994; Taiwan, Ministry of Economic Affairs 1991.

Yet in aggregate, these concessionary loans amounted to only 3.1 percent of all exports in 1986, or less than 1 percent of all bank lending in 1987 and 1.6 percent of total lending in 1985.[21] Small firms accounted for 70.05 percent of Taiwan's 1986 manufactured export sales.[22] Assuming export loans for small firms proportionate to their share of exports, concessionary export loans to small firms amounted to 5.74 percent of all bank lending to small firms and 2.97 percent of total small firm borrowing from all sources.

The large amount of money being supplied even today by informal sources is clear evidence of the limited scope of political exchange in financing rural entrepreneurs; it is wrong to conclude that informal political access is available to all. Even so, the high cost of informal borrowing (see table 9-4)[23] makes borrowing from the banking system the most

attractive option for small business. But bank credit can satisfy only a small slice of overall demand. Recourse to the political process can provide entrepreneurs in Taiwan, China, with preferential compensatory treatment. Whether political exchange results in the acquisition of a stable source of cheap funds, or simply a loan guarantor in the form of a local or provincial politician to ensure future borrowing, the political process has value to any Taiwanese entrepreneur, urban or rural.

Particularly for rural businessowners lacking the variety of financing options available to their urban counterparts,[24] politics is a significant opportunity for economic gain. The correlation between lending to small rural firms and the level of bank politicization provides circumstantial evidence for this suggestion. Table 9-5 shows that the three provincial commercial banks—First, Zhanghua, and Hua Nan—make nearly 70 percent of their loans to small firms. They are the only banks that make a majority of their loans to small enter-

Table 9-5. Bank Lending to Small Firms, Taiwan, China, 1986
(thousands of $NT)

Bank name	*Total lending*	*SME lending*	*SME/ total lending (percent)*
Commercial banks			
Bank of Taiwan	212,143,564	27,034,063	12.7
*Hua Nan Commercial Bank	125,181,340	83,871,271	67.0
*First Commercial Bank	120,368,761	83,290,037	69.2
*Zhanghua Commercial Bank	113,293,682	77,039,704	68.0
Taipei Bank	72,696,093	5,294,412	7.3
Shehua United Commercial Bank	21,805,048	718,057	3.3
Huaqiao Commercial Bank	12,633,003	5,429,271	43.0
Shanghai Commercial Savings Bank	6,023,586	2,383,234	39.6
Gaoxiong Bank	5,961,497	1,273,371	21.4
Agricultural banks			
Cooperative Bank of Taiwan	199,111,294	97,404,562	48.9
Taiwan Land Bank	188,795,042	9,544,362	5.1
Farmers Bank of China	64,505,032	6,168,565	9.6
Trade banks			
International Commercial Bank of China	35,089,234	2,923,066	8.3
China Export-Import Bank	10,728,776	173,556	1.6
Development banks			
Communications Bank	95,439,098	3,185,070	3.3
Central Trust Bureau	21,814,570	215,764	1.0
Total	1,305,589,620	405,948,365	31.1

Note: Data as of June 30, 1986.
Source: Small Business Integrated Assistance Center (1986: 37).

prises and the only banks that are administered by local rather than central government. Although data do not permit an accurate breakdown of commercial bank lending by location, that the three commercial banks have around 300 branches each throughout the island suggests more than an urban business focus. Crudely assuming that the three commercial banks lend equally to rural and urban businesses, loans to rural firms by these three institutions alone account for 46.14 percent, or almost half, of all lending to all small firms, urban and rural. Conversely, loans to small urban manufacturers from all commercial banks amount only to 12.93 percent of total small firm lending.[25]

Political pressure on the officers of the three provincially administered banks carries more than nuisance value. As Sender (1994: 60) observed:

> Provincial assemblymen have a say in everything from staff appointments to budgets to buying cars for overseas offices. In return for cooperative hearings on operating budgets and a recommendation for promotion, bank executives are expected to make the politicians' lives easier. This may mean arranging loans for their acquaintances, buying land at exorbitant prices, or providing campaign funds at low interest rates.

Budget hearings take up two months of every year and require the presence of the senior bank management in the provincial capital for extensive lobbying. And despite excellent credentials, to gain appointment as president of the Hua Nan Bank, Edward Chien found it necessary to visit *each* of the eighty or so provincial assembly members to secure sufficient support (Sender 1994: 61).

The reach of county-level factional elites into local finance is deep: Chu (1989: 158; cited in Wang 1994: 185) claims that nearly 70 percent have KMT-sanctioned interests in cooperative banks and the few private banks, and 60 percent gain from similar ties to credit associations. Chen (1989: 17–18; cited in Huang 1990: 736) goes further, finding that almost all local factions (eighty-one out of eighty-nine) monopolize some form of public resource, most commonly cooperative banks, credit cooperatives, farming and other cooperatives, and passenger transport companies. Moreover, 442 of 518 candidates for the provincial assembly affiliated with local factions controlled at least one such monopoly. Only 72 of 774 candidates unaffiliated with a local faction had similar direct interests. Factional control of economic resources has electoral implications: between 1954 and 1985, only 38.2 percent of candidates for the provincial assembly were affiliated with local political factions, yet they won 61 percent of the contested seats (Huang 1990: 731–32). Interests in these economic institutions serve a rural constituency as well as the politicians themselves; lineage and clientelist norms require that their fruits be shared. Anthropologists find credit relations are particularly affected by such personal ties in Taiwan, China (Deglopper 1972; Gallin and Gallin 1974); in effect, local politicians act as gatekeepers to capital for entrepreneurs.

In other areas of economic interest to rural entrepreneurs as well, Taiwan, China's, local politicians manipulate the rules to benefit themselves and their constituents. With accountability and often multiple ties to individual constituents, and with institutional access to political resources through their official positions, local politicians are in a position to in-

fluence zoning and licensing and to confer other advantages (for example, in locating bus stops) that target business opportunities at particular constituents and locations.[26]

At the central government level, as much as an upsurge might be expected, the legalization of opposition parties and the strengthening of the legislature since the mid-1980s has not resulted in wholesale realignment of small industrialist behavior away from local clientelism toward the lobbying of the central government. While there are a number of plausible explanations for this non-event, including the collective action problem at the central level and the gradual elimination of credit scarcity conditions, only one follows directly from my cost-based political argument: that the unknown cost of lobbying the central government for indeterminate benefits outweighs the known cost of obtaining the tangible benefits secured by the provincial assembly member's capture of government resources.

Small industry's lobbying costs at the central level are indicated both by the challenge of matching the favorable lobbying position of big business in general and by the particular conflicts of interest posed by members of large industrial families holding seats in the national legislature. While legislators at the national level must now seek popular support partly in the form of small-business votes, their constant search for funds also results in consideration for the often antithetical positions of potential big-business backers. Limited national-level organization by small business, on the one hand, in part the product of central government's past licensing requirements and agenda control over interest associations, and the substantial investment required to learn to lobby the central government, on the other, effectively suggest the continued importance of local rather than central small-business political activity to sustain entrepreneurial vitality at the local level.

The case of Taiwan, China, shows that the constraints on political action imposed by the central government's domination of policymaking and its restrictions on political lobbying can be mitigated by the synergies generated through linkage between local government structure and underlying social organization. From the perspective of principal-agent theory, the dynamic of electoral accountability established by the provincial assembly and Taiwan's other local elected offices forces the KMT to accept significant agency costs. From the perspective of rural entrepreneurial vitality, however, the space for political exchange permitted by these agency losses reduces policy and economic constraints on local industrial viability. As such, the design of political institutions contributes to the success of small industry. In Korea, however, tight control over not just political access but also over the power of local politicians to distribute state resources and implement state rules raises the cost to small business of political action, closes off opportunities for state structure to interact with local social structure, and thereby limits would-be entrepreneurs either to expensive economic self-help strategies, such as curb market borrowing, or to market exit and urban migration.

The absence of elections for local officials and the restrictions placed on interest associations in Korea have effectively precluded the political representation of small industry. Central control is accomplished by several means. The local bureaucracy acts without legislative review, but its authority is superseded by all central government decisions. The

Ministry of Home Affairs affects local governance by reviewing local budgets, supervising local officials, recommending new appointments, and controlling the police. Prominent local officials (about 17 percent of the total) are members of the central civil service, and the most important of these are central higher civil service members. Influential figures such as the provincial governor are rotated rapidly to avoid local entrenchment (Jacobs 1985: 33–34).[27] Appointed by the central government, Korea's local officials are not motivated by local conditions, an interest in local development, or by any need to cultivate authority over the local populace, but rather by the hope of acquiring a good reputation in Seoul's halls of power. Gradual change in this situation with limited local elections in 1991 culminated in June 1995 elections for provincial governors and urban mayors. Yet while these elections imply greater local government accountability, the continued retention by the central government of political control, state resources, and regulatory power means only marginal change in the constraints on political action small entrepreneurs face. Entrepreneurship in rural Korea has been largely stifled by state organization for centralized control, leaving little space for local political exchange.

Collective political action also has only limited effect in Korea. Although the Chambers of Commerce have demonstrated their independence as interest groups in recent years, their policy goals do not necessarily overlap those of rural entrepreneurs. Other interest groups embracing small-firm interests are creations of the state; they receive government funding and staff and implement state policy. They collect data on small business and consult with officials in the economic bureaucracies in an ad hoc manner, but the bureaucracy relies upon the president and his staff rather than the private sector to steer policy change. An annual Small Business Day allows small-firm representatives to meet with the Korean president and articulate their views, but few other institutionalized opportunities exist for small firms to broach their concerns to Korean policymakers. Faced with limited access to those with the power to lessen the economic and political constraints belaboring rural entrepreneurs, and plagued by weak demand for subcontracting from the vertically integrated *chaebol*,[28] only informal borrowing and other informal, individual activities remain as costly but necessary self-help strategies for Korea's small entrepreneurs.[29]

The democratization process in Korea, like that in Taiwan, China, has meant little to Korea's rural entrepreneurs in practice; presidential elections and a freer press have neither significantly eased their access to the policy process nor sanctioned new forms of political participation. Gains will come to Korea's rural entrepreneurs only when specific institutional changes are made that induce local government to focus on local constituents and permit local officials the discretion to implement policy and utilize state resources.

Japan

Postwar Japan presents a very different situation. Bureaucratic records indicate that the Ministry of International Trade and Industry's (MITI) predominant small-business policy goal in the early postwar years was continued industrial rationalization,[30] even at a time of high unemployment, social stress, and Occupation policies aimed at the dissolution of

concentrated economic power. Such a policy meant continued hardships and tight finances for all small entrepreneurs. Yet numerous policy measures were enacted by the Diet to aid small-business financing: in 1951 bank reform laws were passed creating new classes of financial institutions specifically for small business (the *sôgô ginkô* and *shin'yô-kinkô*); state corporations were established in 1949 and 1953, again to lend specifically to small enterprises;[31] and in 1956 a statute was enacted to protect the usually small-scale subcontractors from late payments for services rendered. In this case, a political dynamic operated to overcome the designs of the powerful economic bureaucracy.

The rapid postwar lifting of restrictions on independent interest associations produced an explosion of well-organized vocational associations.[32] At the same time that postwar democratization legitimized interest articulation and lobbying, it also strengthened the powers of the Diet relative to other government organs (cf. the prewar and wartime periods), incited competition for supporters among the emergent political parties, and, finally, given the absence of strong central party organization, encouraged individual national-level legislators to develop their own local networks of supporters.[33] Taken together, the extensive organization of small industrialists and the incentives to politicians to seek out and cultivate new constituencies eased access for small entrepreneurs to the political process and encouraged political action as a way of adjusting to constraints on the availability of investment capital. Thus, under a particular set of institutional and organizational circumstances, small entrepreneurs could both articulate their interests and push politicians for policies that addressed their concerns over the stated interests of the bureaucracy.[34]

Political Institutions and Social Organization

Efficiency and Local Politics

Political institutions facilitate economic outcomes in other ways as well. For example, with knowledge of the consequences to economic efficiency of the legislative influence of Japanese and Korean farmers, one might justifiably question how access to the political system, as suggested by the case of Taiwan, China, has possibly managed to redound to the benefit rather than to the detriment of local development. In certain cases, however, social ties and political institutions can create the conditions that allow political action and lobbying to result in social gains rather than social costs.

First, local politicians may define their personal interests in terms of local development if they believe that gains from local development will benefit them. Self-interest and community interest will overlap when there is an incentive to value absolute over relative gains. This situation is most likely to obtain when, as is the case for Taiwan, China, economic and political exchange between political agents and their constituencies is personalized and linked by family, clan, or other social ties.[35]

Second, political institutions can lengthen time horizons. Although not necessarily moving politicians to concern for long-term constituent welfare, a long-term view can at least

discourage the political predation on the private sector commonly visible in the developing world by reducing the pressure on politicians to value power maintenance and opportunity for personal gain over public service. Long time horizons can obtain under conditions like those found in Taiwan, China, where the electoral rules, including those rewarding vote- and office-buying, produce a lock on electoral districts and offices for politicians (Rigger 1993). Contrast this situation with that in Korea, where short time horizons and two-year rotations are the norm for local political appointees, or to that elsewhere in the developing world, where weak institutions produce precarious tenures for politicians and prompt short-term rapacity.

When the political rules of the game do not provide politicians with the confidence to ignore considerations of political survival, politicians became obsessed with the maintenance of their political authority and legitimacy and use all available means to perpetuate it. This also may result in benefits for constituents in the form of policies and perks aimed at buying support, although such gains are likely to be transitory in the absence of rules that help to secure long incumbency. Appointed officials in Korea, however, almost certainly will not care to seek out local political support, for they govern at the pleasure of their superiors in Seoul. Political authority and legitimacy may facilitate local acceptance, but they are not required for appointed politicians to maintain their positions.

Finally, the existence of clientelist social norms suggests that all political support comes to a politician with clear reciprocal obligations and that elected politicians will direct resources and opportunities toward their supporters accordingly. Indeed, to a greater degree than complex and atomistic urban society can, rural patron-client ties and factional organization enmesh politicians and constituents in obligatory yet instrumental roles—ensuring credible commitments. Absent clientelist obligations, little pressure exists for appointed politicians in rural Korea, even if of local origin, to share personal or institutional access to government resources with their constituencies.

Politics and Patron-Client Relations

As is obvious with a moment's thought, patron-client ties exist everywhere, but produce varying effects. As an explanatory variable, therefore, patron-client relations cannot stand on its own, but must be tied to a theory that explains the way in which clientelism matters. An understanding of patron-client relations and their role in encouraging entrepreneurship benefits, therefore, from an awareness of political conditions and institutions. Clientelism in Taiwan, China, enables rural entrepreneurship by joining with a particular political structure to direct otherwise unavailable state resources toward local purposes. Clientelism and the social organizations that distribute its spoils do not create entrepreneurship; they simply facilitate its emergence. Because state structure affects two sets of actors—government actors and societal actors—clientelism can act to exploit the interests of both for mutual benefit.

Korea's state structure allows little place for the political assertion of local economic interests, mainly because the authority of local political appointees derives from the center

rather than the locality, and because local officials have less flexibility on policy than elected officials might. Together with the high economic cost of entrepreneurship, finance, and subcontracting, the inaccessibility and high cost of political recourse precipitates rural market exit among potential industrialists and contributes to Korea's flaccid rural industrial sector. Altered state structure should lower the cost of political action, however, and the local elections of June 1995 should produce new coalitions of local entrepreneurs, both economic and political.

Policy and Entrepreneurship

In addition to the effects of interacting political rules and social organizations, policy may also create openings for entrepreneurship. Contrasting Korean and Taiwanese stances toward foreign direct investment are a case in point.

Korea prefers foreign lending to foreign direct investment: for most years since 1965, foreign direct investment has amounted to less than 5 percent of total foreign capital inflow (Amsden 1989: 76). Taiwan, China, in contrast, has tried to attract multinational corporations for both economic and national security reasons since the early 1960s, first in labor-intensive and then in technology-intensive industries. In Korea in 1975, only 17.8 percent of foreign-firm subsidiaries were 95 to 100 percent parent-owned. In Taiwan it was 45 percent, compared with a figure for the rest of the developed and developing world of 67.4 percent.[36]

The Korean state acts both as gatekeeper to foreign investment and as the agent of technological transfer, approving for direct investment only projects that promote sanctioned production goals, sectors, and technologies, and for which licensing arrangements are unavailable. Foreign firms normally are obliged to take a Korean joint-venture partner and surrender equity after transferring effective know-how (Mardon 1990). But when that know-how is monopolized by the Korean joint-venture partner, few market mechanisms exist to ensure the diffusion of the transferred technology to other Korean firms. The monopolist has no incentive to share knowledge and, in the absence of competitors, no reason to improve its efficiency.

In Taiwan, China, too, the state encouraged foreign firms to transfer new technology, but Taiwan allows foreign-owned factories to hire local labor and produce for both export and domestic use; Taiwan has not succeeded in barring entry to all firms that compete with domestic producers. Technology transfer is accomplished primarily through workers in the multinational's factories who are trained but quickly leave their employers to start their own firms, often as subcontractors to the foreign producer.[37]

How can such a dynamic aid rural industrialization? Multinational spin-offs have little reason to leave the urban marketplace, particularly if the parent that provides work orders is based there. General Instruments, one of the earliest foreign firms to set up in Taipei, is now surrounded by smaller subcontractors, founded and run by its former employees. Taiwan, China's, policies on foreign direct investment benefit rural industry only insofar as social norms are given their head to locate subcontracting and supply sources in the

countryside. Extended families and lineage ties reduce the costs of investment and the risks of failure. The political exchange produced by the interaction of state structure and clientelism can also reduce capital and other business costs. Nevertheless, the required social networks and clientelist organization are entrenched only in the countryside; urban associations are more varied but less robust.

Conclusions

Broad political factors have as much power to shape markets as the specifics of policymaking. Politics cannot be defined out of markets, but this does not mean that the market mechanism cannot operate freely within the constraints that government, policy, and other variables impose. Analysis of the bases of rural industrialization and the manifestation of entrepreneurship is improved, therefore, wherever it is possible to explain the existence and implications of these political factors. This chapter suggests that only a political-economy approach to economic problems makes such an explanation possible.

Through politics, interests compete for relative advantage and distributional gains. Those who control resources often distort economic rationality and cannot always be persuaded to surrender their own stakes for disinterested administration. Accordingly, one of the main themes here is the need to direct attention toward the political context in which economic development occurs so as to note and harness political interests for developmental ends rather than to dissipate developmental resources in ignorance of political constraints on the market.

The contrast between Korea, where development policy measures have failed partly because of the obstacles to entrepreneurship posed by state structure, and Taiwan, China, where state structure assists local development by rewarding political and social interests, is a case in point. The case of Taiwan shows first that political structure has consequences for economic as well as political outcomes, and second that institutional variation can significantly alter the opportunity set for small entrepreneurs. Although Taiwan's vital rural industrial sector may be the product of an unintended synergy among political structure, actor interests, and underlying social norms of interaction, the understanding that political structure is a matter of political choice, and that actor interests are often shaped decisively by the incentives organizational and institutional structure provide, suggests that regardless of the historical path that led to positive outcomes for small entrepreneurs in Taiwan in the face of central government control over access to policymaking and investment capital, similarly beneficial conditions can be created as a matter of political choice elsewhere as well.

The general lesson is that although cross-country differences suggest that the origins of variation in state structure are historically and socially based, this should not block policymakers from realizing that changes in both political organization and institutions can auger not only a new style of politics with new political actors, but also previously unobtainable consequences for the economy and economic actors. In contrast to the differ-

ences between Taiwan, China, and Korea in infrastructure and economic diversity, the elimination of which required years of effort, the differences in political structure between Taiwan and Korea that block rural entrepreneurship are products of conscious decision and can be altered much more quickly.

Notes

1. Other assumptions include the following: (a) Entrepreneurs prefer to maximize their access to capital as a means of maximizing growth. Relational subcontracting here is thus either a source of capital or a cost-reducing strategy. (b) Entrepreneurs need significant amounts of stable capital for start-up or technical upgrading in such areas as machine tools, electronics, metalworking, or even bicycles and carbon-fiber tennis racquets. Weaving and garment sewing are not typically capital- or investment-intensive processes. (c) There are significant constraints on the availability of such capital from the formal banking system or from family and friends, regardless of whether those constraints are products of market or government failure.

2. The difficulty, of course, is in obtaining data with enough detail to make the actual rural/urban boundaries clear.

3. The lack of separation between provincial cities and the less densely populated countryside in the data probably also masks a net migration to the smaller cities.

4. Author's interview of Mr. Ducksoo Lee, former AFDC vice-president, November 26, 1994.

5. Bates (1981) suggests how agricultural policies born of a ruler's desire for political self-preservation can result in both urban and transnational migration and in the selective provision of agricultural inputs and infrastructure.

6. This description relies upon Kim (1991: 11–15).

7. The Saemaul ("New Community") movement was a 1970s attempt by Park Chung Hee to consolidate political support for his regime at the grassroots level. Saemaul's ideology called for self-sacrifice, hard work, and political loyalty. Its economic aspects included attempts to slow the pace of urbanization and to support the rural economy by encouraging firms to relocate to the countryside; hence the term Saemaul factories.

8. Author's interview with a senior analyst at the Korea Development Institute, Seoul, October 1995. Note that the Saemaul movement constituted a general effort to support agriculture and reduce pressures for urbanization; it was not a developmental program for rural industry alone.

9. See Yager (1988: 122–23) and Simon (1988: 144–46).

10. On Taiwan, China's, public enterprises and the KMT-state enterprise nexus, see Wu (1992) and Chen and others (1991). One summary of grain procurement policy and the rice-fertilizer barter system is Yager (1988: 258–60).

11. Author's interviews, October 1992–August 1993. This phenomenon creates a difficult measurement problem, for there are few ways to distinguish from the outside small companies spun off from a parent for tax avoidance purposes from similar entities born of less instrumental entrepreneurial motivation. More to the point, it is difficult to know when economic factors alone justify or explain a particular form of business organization.

12. For Japan, see Patrick and Rohlen (1988: 366–68); for Taiwan, China, author's interviews, 1992–93. Observers of the Korean scene also frequently comment that much business takes place off

the books, partly because the Korean government takes audits seriously as a political tool. The most prominent case involves audits of Hyundai Corporation and charges against its chairman, Chung Ju Yung, in response to his political ambitions (for a summary see Koh 1992: 7–8). Clifford (1994: 308–09) notes actions by tax authorities to enforce policy objectives on a much smaller scale at the grassroots level. Note that these anecdotes illustrate the plain connection between regulation and behavior; they clearly do not define the behavioral effects of the tax code or imply that stringent or lax enforcement explains variance in the rural industrial vitality of Korea and Taiwan.

13. Author's interviews, autumn 1994 in Korea and spring 1993 in Taiwan, China; confirmation for the Taiwan case in remarks by Wing Thye Woo at the World Bank workshop on the "Role of Government in the Evolution of System Change, " Hakone, Japan, December 19, 1993.

14. Olson (1965) holds that for large numbers of individually rational actors, large-scale collective action is discouraged in the absence of selective incentives preventing free-riding by some on the organizational efforts of others. Bates (1981) suggests that low rural population densities also discourage collective action by raising coordination costs. This claim is challenged in East Asia, however, by high population densities and the relatively short physical and psychological distance between city and countryside.

15. Author's interview with former Minister of Finance Shirley Kuo (Kuo Wanrong), July 31, 1993.

16. Interfirm lending allegedly accounts for just 3 percent of all informal lending, but more may be subsumed in the "nonprofit financial groups" (*feiyingli tuanti*) and "personal" funding categories. Economic Research Department, Central Bank of China, *Flow of Funds in the Taiwan Area, Republic of China*, cited in Huang (1988: 214).

17. For figures on the number of small firms, see Small and Medium Enterprise Agency (1991: 257). For lending figures (36.43 percent), see Small Business Integrated Assistance Center (1986: 38). Note that the eight small and medium-size enterprise banks, chartered with the mission of lending to Taiwan's smaller firms, manage to divert one-quarter of their funds to large enterprises. Their impact is significant but small. *Total* lending in 1986 by the small enterprise banks amounted to only 13.2 percent of the ordinary banks' lending, and their lending to *small firms* amounted to 32.6 percent of the ordinary banks' lending.

	SME banks	*Ordinary banks*	*SME/ ordinary banks*
SME lending (NT$)	132,307,934	405,948,365	32.59%
Total lending (NT$)	172,019,709	1,305,589,620	13.18%
SME/total lending	76.91%	31.09%	

18. Office of Economic Research, Bank of Taiwan (1987: 9).

19. Economic Research Department, Central Bank of China, *Zhonghua Minguo Taiwan Dichu Jinrong Tongji Yuebao* (Monthly financial statistics, Taiwan area, Republic of China), cited in Ya-Hwei Yang (1989: 48, 50).

20. Small and Medium Enterprise Agency (1991: 288).

21. Cases exist of interest rates exceeding 10 percent weekly. Author's interviews in Taipei, autumn 1993.

22. For a sense of the diversity of informal lending options, see Biggs (1988: 21–33).

23. The proportion of small rural and urban industrialists was taken from table 9-1; lending figures are from table 9-5.

24. Author's interviews, spring 1993, especially with Professor Yun-Han Chu and Judge Zhiming Jiang, Taizhong Regional Court. This is not the place for a normative evaluation of informal political behavior, but it is worth noting that political corruption redounds to socially beneficial ends in Taiwan, China, by creating opportunities for entrepreneurial vitality in otherwise economically hostile environments. Without the possibility of political intervention or without a politician's guarantee, for example, central government restrictions helped ensure that potential entrepreneurs had only limited access to formal credit markets until the mid-1980s.

25. For an incisive study of Korean authority relations, see Jacobs (1985). Another influential study is Henderson (1968).

26. Since the protracted labor disputes of 1986-87, however, the *chaebol* have increasingly sought out small firms as subcontractors in order to spin off the now more costly, but lower value-added, production tasks previously kept in-house.

27. As an example of the costs involved, informal rural borrowing, mostly for productive investment, sent farmer debt levels skyrocketing over the course of the 1980s, to the point that the central government intervened with several bailout packages of a trillion won each. According to one report, average debt levels in 1985 alone exceeded farmer financial assets by 15 percent, making their liquidation insufficient to repay the loans. See Suh Myong-soo, "Farm Debt Relief Measures to Infuse Vigor to Rural Front," *Korea Herald*, March 17, 1987.

28. In particular, see Japan, Ministry of International Trade and Industry (1963: 365-70). While rationalization normally connotes productivity and efficiency gains, the Japanese term also bears the historical implication of consolidation or liquidation for inefficient firms through merger or other means.

29. The People's Finance Corporation (Kokumin Kin'yû Kôko) was established in 1949 for small business in general. The Small Business Finance Corporation (Chûshô Kigyô Kin'yû Kôko) was established in 1953 to serve small industrialists in particular, and was funded by MITI's budgetary requests under the new Fiscal Investment and Loan Program.

30. Some of these were the product of the state's wartime organization of production, but after the war they shifted from representing the state's interests toward representing those of their members.

31. See Masumi (1992) on the evolution of politician support groups.

32. Ramseyer and Rosenbluth (1993: 125–26) offer a summary of the case of Japan's credit unions (*mujinkô*), which also blocked bureaucratic pressures for the consolidation of small financial institutions by taking their concerns to the politicians.

33. In the absence of such ties, policy incentives can accomplish the same purpose. Compare China's tax structure, which increasingly allows local government to retain some portion of tax revenue: whether rural or urban, local officials have since become converts to the cause of local economic growth. See Oi (forthcoming).

34. The figure for Japan was 18.5 percent (Curhan, Davidson, and Suri 1977: 316–17).

35. Paper presented by Danny Kin-Kong Lam at Harvard University, August 26, 1992. The phenomenon is not restricted to MNC employees, but is widespread and is reflected in high urban employment turnover.

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Part III. Comparative Perspectives

10

Organizational Characteristics of Rural Textile Industries in East Asia

Akihiko Ohno and Masao Kikuchi

The chapters in this volume investigate the rural garment and weaving industries of five Asian countries. The basic working hypothesis is that the wide diffusion of industrial and commercial activities in rural areas depends largely upon development of the relational contracting system rather than the factory system or discrete transactions in the spot market. The country case studies reveal that the relational contracting system has indeed been widely adopted in the textile industries, and that with this system, the rural textile industries maintain their competitive edge in urban markets by mobilizing local resources, particularly entrepreneurship and labor of low opportunity cost.

Despite a basic similarity, there is no single mode of the relational contracting system across the countries, between the two textile industries studied, or over time. Each mode of the contracting system has its own peculiarities. This diversity, however, does not imply that there is no rationale behind the contracting arrangements. Instead, these arrangements offer clues to a comprehensive understanding of how a particular mode of the relational contracting system is chosen, in keeping with differences in socioeconomic and institutional environments.

Our concern in this chapter is, while confining our main attention to the textile industries examined in this volume, to illustrate a simple taxonomy of the relational contracting system.

Analytical Framework

Five chapters in this volume (Chapter 3 on Japan, Chapter 5 on the Philippines, Chapter 6 on Thailand, Chapter 7 on China, and Chapter 8 on Korea) depict the modes of the rela-

tional contracting system adopted under different conditions in the textile industries of East Asian countries. In this section, we set forth an analytical framework that allows us to place these studies in a comparative perspective.

Relational Contracts as an Organizational Form

In the framework of organizational forms, formal organizations (vertical integration or the factory system), markets, and relational arrangements are the major alternative mediating structures of transactions. In this view, the factors that determine the "make or buy" decision must be explored first. When the choice of urban businesses or middlemen is to buy, our second question is whether spot market transactions or relational transactions are preferred. When the choice is relational transactions, a third question concerns the reasons for the choice of a particular mode of that system. A taxonomy of the relational contracting system, therefore, needs to be explored within the framework of the choice among three organizational forms by specifying the local conditions that prompt the emergence of particular forms.

Positions of the Economic Actors in the Relational Contracting System

The five country chapters focus on the aspects of the relational contracting system. Figure 10-1 illustrates the relative positions of the economic actors involved in the system in the rural-urban continuum and the main areas examined in each chapter.

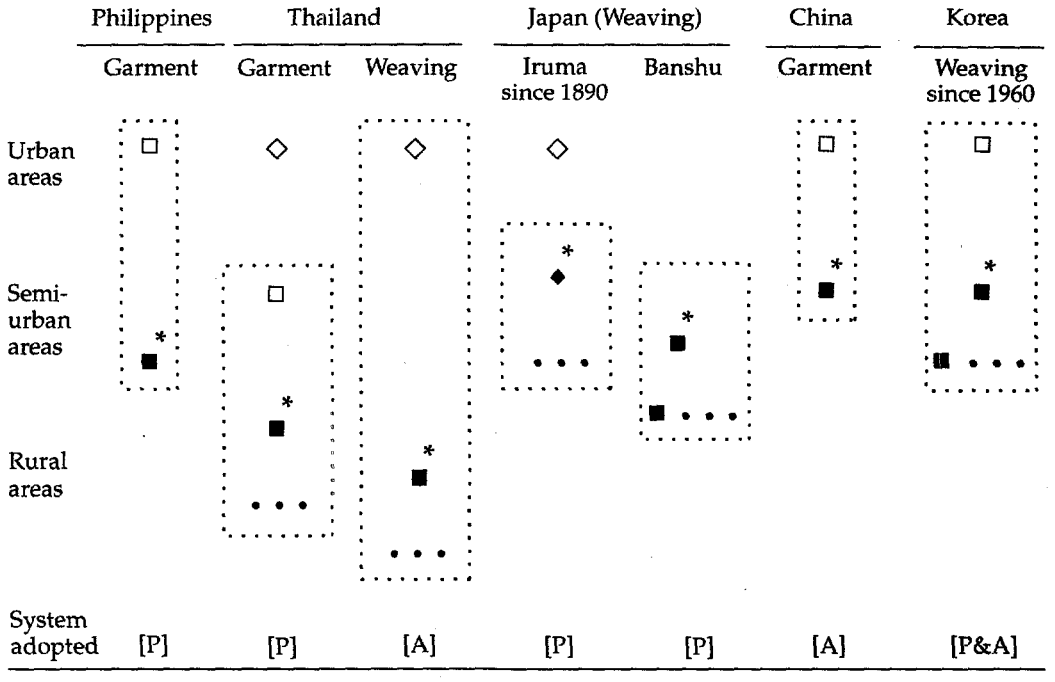
An important contrast is that in Chapter 3 on Iruma, the association between the rural merchants (rural entrepreneurs) and the independent weavers (agents) is viewed as a putting-out system. In Chapter 6 on Thailand, however, the association between the weaving/garment leaders (rural entrepreneurs) and the independent weavers/sewers is regarded as an employment relationship, while that between rural entrepreneurs and urban businesses is considered a putting-out system. According to agency theory, rural entrepreneurs are principals in the case of Iruma, while they are agents in the case studies of the Philippines, Thailand, Taiwan (China), and Korea. Accordingly, in finding common characteristics among the textile industries in the five countries, meticulous attention should be given to the different focal points of the papers.

Modes of the Relational Contracting System

The relational contracting system can be divided into the putting-out system and the advance-order system. In the former, principals advance materials for processing to their agents, and later collect the finished products for a piece-rate payment; in the latter, principals only guarantee purchase of the finished products and there are no advances (see Chapter 1 of this volume by Hayami).

The case studies in this volume, however, require finer distinctions in the relational contracting system from the viewpoint of decisionmaking on product specifications, which

Figure 10-1. Relative Positions of the Economic Actors in the Relational Contracting System in East Asian Textile Industries



Note: ◆ = merchants, ■ = workshops, and • = individual workers (including family-run workshops). Shaded and unshaded marks imply indigenous and modern respectively. Asterisk (*) indicates rural entrepreneurs. Dotted rectangles are the focal areas investigated in respective papers. P and A denote the putting-out and the advance-order systems, respectively, according to the classification of respective case studies.

largely determine product marketability. Product specifications involve product design, product standardization, and quality control. In general, market information on product specifications is poorly communicated across markets because of asymmetric information and the untransferability of production skills between principals and agents. Asymmetrical distribution of market information and production skills between principals and agents among the textile industries in the five nations examined in this volume has led to the various modes of the relational contracting system.

To achieve this greater refinement, we introduce a concept—"hold" over a product—to refer to obtaining market information on product specifications that is unobservable to others and/or to having distinct skills that are often untransferable to others. Because such "hold" is a technological factor, it should be distinguished from the concept of merits/demerits associated with a specific contractual mode. In addition, those who have "hold" over products do not necessarily possess marketing ability. By taking hold over the

Figure 10-2. Typology of the Relational Contracting System

Advance	Product Specifications: Precise	Product Specifications: Loose
Yes	Putting-out system (I)	Putting-out system (II)
No	Advance-order system (I)	Advance-order system (II)

product into consideration, the following four modes of the relational contracting system can be identified (figure 10-2).

- THE PUTTING-OUT SYSTEM (I): Principals advance materials to agents along with precise product specifications. Advances are generally made in the form of materials, because market information on product specifications is usually embodied in those materials, such as precut cloth in the garment industry and dyed, warped, and sized yarn in the weaving industry.[1]
- THE PUTTING-OUT SYSTEM (II): Although principals advance materials or cash, they designate only general product specifications.
- THE ADVANCE-ORDER SYSTEM (I): Although principals do not advance materials or cash, they designate precise product specifications, such as the kinds of materials to be used.
- THE ADVANCE-ORDER SYSTEM (II): Principals do not advance anything, nor do they designate precise product specifications; they merely guarantee the purchase of the products from their agents.

Among the four relational contracting modes, the putting-out system (I) and the advance-order system (II) are polar cases, while the putting-out system (II) and the advance-order system (I) are in-between. On the continuum of transactions from the spot market to vertical integration, or even the factory system, the putting-out system (I) is closest to vertical integration, while the advance-order system (II) is most akin to spot-market transactions in that neither advances nor product specifications are made in the transactions.

Stages of Market Development

The stage of market development is another important determinant of contractual mode. By market development, we refer to how effectively the local market is integrated into urban markets or into overseas markets. It will be useful to distinguish three stages of market development: transactions within rural areas (local transactions); transactions with particular urban businesses (relational transactions); and transactions with numerous, anonymous urban businesses (ecumenical spot-market transactions).

When transactions are mainly confined to rural areas, a spot market is apt to emerge. This is because product specifications are of less concern in the local market and, among other factors, rural producers have little trouble marketing their products in their areas. As rural societies are engulfed by urban markets, the localized spot market is subject to change because many products of rural industries, although not all, are inferior goods, which diminishes the competitive edge of rural industries. At this stage, rural industries must maintain a competitive edge against their modern counterparts. Our basic working hypothesis on the relational contracting system can thus be extended as follows: the relational contracting system is instrumental in enhancing the competitive edge of rural products by solving the problems associated with rural industries in the process of market development.

In economic development, marketing channels within the urban market are developed by urban businesses in particular; rural producers often lack marketing ability (a stage of relational transactions). At this stage, urban businesses become indispensable not only in their role as wholesalers, but also as conduits of market information and as quality controllers for product specifications. When the rural market develops further, necessary information on product specifications would become directly available to rural producers and the marketing difficulties of rural producers will be largely solved. This is the stage of ecumenical spot-market transactions that none of the rural economies discussed in this volume has reached.

The taxonomy of the relational contracting system is summarized in tables 10-1 and 10-2. Table 10-2 presents the relative dominance of hold over the products among economic actors involved in the relational contracting system discussed in this volume, and the contracting systems adopted in the five countries. Table 10-2 shows the taxonomy of the system in accordance with the flows of materials and information on product specifications from principals to agents. In these tables the relational contracting systems discussed in this volume are renamed according to our classification.

Propositions

The above discussion can be summarized into the following two propositions on modes of the relational contracting system in association with hold over products.

PROPOSITION 1: When principals (mostly urban businesses) have hold over products in relation to agents (mostly rural entrepreneurs), the putting-out system (I) or the advance-

Table 10-1. Relative Dominance of Hold over the Products

	Independent workers	*Rural entrepreneurs*	*Urban actors*	*Modes of contracting system*
Garment industry				
Philippines and Thailand	—	—	***	P (I)
China	NE	—	***	A (I)
Weaving industry				
Thailand	**	***	—	A (II)
Korea: 1950s	NE	*	—	Spot market
1960s to present	NE	—	*	P (II) & A (II)
Iruma: before 1890	*	—	NE	Spot market
after 1890	—	**	NE	P (I)
Banshu				
Vertically striped	—	*	NE	P (I)
Cross striped	**	**	NE	P (I)

Note: Asterisks denote hold. Their number implies the importance of hold. NE and — denote insignificant hold and nonexistence of economic actors involved in the transactions. P and A denote the putting-out system and the advance-order systems respectively, with their type in parentheses.

Source: Authors' data.

order system (I) will emerge. Principals are obliged to supply market information on product specifications because they can acquire it at relatively low cost. Because supplied materials often embody necessary information on product specifications, the putting-out system (I) is a usual consequence; a possible alternative is the advance-order system (I). It emerges when necessary materials and services designated by principals are readily available in the market and agents do not suffer from working-capital constraints.

PROPOSITION 2: When rural producers have a hold in relation to urban businesses, the putting-out system (II) or the advance-order system (II) may appear. It would be assumed that the former would be adopted when agents suffer from working-capital constraints,

Table 10-2. Modes of the Relational Contracting System in East Asian Countries

Supply from principals		*Modes of contracting system*	*Cases in this volume*
Material	*Product specifications*		
1 Yes	Yes	Putting-out system(I)	Garment industries of the Philippines and Thailand, Iruma since 1890, Banshu
2 Yes	No	Putting-out system(II)	Korea since 1960
3 No	Yes	Advance-order system(I)	China
4 No	No	Advance-order system(II)	Weaving industry in Thailand, Korea since 1960
No	No	Spot market	Iruma before 1890, Korea in the 1950s

Source: Authors' data.

and the latter would be selected when they do not. These modes may also appear when product specifications are not enumerated in the contract between principals and agents—for example, when products are inferior or a third party is in charge of product specifications, such as printing and dyeing.

In any mode of the relational contracting system, rural actors are supposedly faced with difficulties in placing their products on the urban markets. The advances made in the relational contracting system have two distinct functions: (1) when made in the form of materials, they embody market information on product specifications, such as design, color, size, and the like, and (2) they allow agents to cope with their working capital constraints. The first form of advance is a pivotal feature of the putting-out system (I), although it entails the second function as well. The putting-out system (II), which by definition offers the second function, is akin to the advance-order system (II) in that the transfer of market information on product specifications from principals to agents is not as critical as it is in the putting-out system (I).[2]

As mentioned above, the ecumenical spot market works much like the advance-order system (II). This spot market will appear when the following condition is satisfied in addition to those of the advance-order system (II): rural producers are not faced with critical difficulties in placing their products on the urban markets and can secure market information on product specifications. The basic working hypothesis of this volume, framed by Hayami (in Chapter 1), can be paraphrased to argue that the relational contracting system is instrumental in diffusing industrial and commercial activities over rural areas because the above conditions for the ecumenical spot market are seldom met in the rural areas of developing economies.

Rural Textile Industries in an East Asian Perspective

Insights from the Japanese Experience

The emergence of the putting-out system in Iruma in about 1890 has important implications for the evolution of rural textile industries in a historical context. Before 1890, impersonal spot market transactions were prevalent in Iruma for textile products; local merchants purchased cotton cloth at local markets, or directly from the weavers, and sold it to local wholesalers. The agrarian society of Iruma had been involved in the market economy before the emergence of the putting-out system. During this period, the weavers had a hold over their products. Consumers, however, were less fussy about the quality of products, and the Iruma brand had not yet been established.

Around 1890, the putting-out system emerged in Iruma as the local market became integrated in the national market. In this process, product specifications were imperative for the maintenance of the market competitiveness of Iruma-brand cloth. Accordingly, the role of local merchants as information conduits or quality controllers became crucial. For this purpose, they started to supply dyed, warped, and sized yarn to village weavers.

Consequently, hold over the products was passed into the hands of local merchants, leading to the adoption of the putting-out system (I), as predicted in Proposition 1, above. Under the growing need for product standardization, the weavers themselves were also obliged to adopt the putting-out system (I). This clearly shows that the putting-out system is complementary to the market mechanism.

It is also interesting to note that along with the advent of the putting-out system, the merchants decreased the geographical range of their transactions. This does not imply that the ecumenical spot market preceded the putting-out system in Iruma;[3] rather, the localized market preceded the relational contracting system. Despite the ostensible market segmentation, the emergence of the putting-out system is indubitably an institutional change brought about by change in market environments. The putting-out system in Iruma brought the rural economy from the stage of local transactions to the next stage of relational transactions: the introduction of the putting-out system implies not the weakening, but the strengthening, of the market mechanism in rural areas.

Itoh and Tanimoto (Chapter 3) examined the period before the introduction of mechanical looms. A useful, related example is the case of a rural weaving workshop in Banshu, now Hyogo Prefecture, in western Japan, in the 1910s after the diffusion of mechanical looms.[4] This example provides a good standard for comparison with the weaving industries of other East Asian countries where mechanical or power looms are in use.

The workshop in Banshu was operated by a family that acted as a principal (hereafter, the principal-weaver). Banshu was known for producing indigenous striped cotton cloth. The cloth produced in Banshu was similar to Iruma's—a large variety of plain cloth in small quantities. Two styles of plain cloth were woven in Banshu—vertically striped and cross-striped (plaid) cloth. Before the 1910s, while the former could be woven on mechanical looms, the latter could be made only on handlooms, primarily fly-shuttle looms.[5]

This principal-weaver engaged in manufacturing vertically striped cloth with mechanical looms in his workshop; he employed ten to twenty weavers, mostly married women. In addition, he put work out to village producers (hereafter, agent-weavers) for both kinds of cloth. Vertically striped cloth was put out to rural workshops that had installed mechanical looms, while cross-striped cloth was made by farm household workshops that owned handlooms. The former workshops employed relatively more weavers; for example, one workshop hired sixty-nine workers. The latter were either household workshops that employed about ten weavers or family-operated workshops. For cross-striped cloth, the agent-weavers themselves possessed weaving skills because the cloth could only be woven on handlooms. Because of the need for product standardization, however, the principal-weaver supplied dyed, warped, and sized yarn for the agent-weavers for both vertically and cross-striped cloth. Hold over the products was in the principal-weaver's hands in Banshu, because product standardization had already been required in the market. Under these circumstances, the contracting mode employed for both kinds of cloth was the putting-out system (I), as assumed in Proposition 1.

There remains a second question: why wasn't the factory system selected instead of the putting-out system? In other words, why did the principal-weaver choose to "buy" rather

than "make"? Many of the chapters in this volume point to flexibility in the size of production as a major factor that supports adoption of the relational contracting system rather than the factory system. With the relational contracting system, principals can achieve production flexibility without worrying about the utilization rate of fixed capital. The following may lend further support to this argument. A technological constraint on the principal-weaver in Banshu was removed when mechanical looms were improved to weave cross-striped cloth. Even so, the principal-weaver kept putting work out to farm household workshops for cross-striped cloth. By putting work out, the principal-weaver could achieve greater flexibility against demand fluctuations. The agent-weavers were generally married village women who enjoyed flexible working hours and could allocate their time between weaving and household chores at will.

This relates to the difficulties associated with labor management in early factory organizations, as pointed out in Chapter 6 on Thailand. For example, the workshop operated by the principal-weaver in Banshu to produce vertically striped cloth suffered from high absenteeism among its weavers.[6] This was partly because the principal-weaver had not established a labor-management system that encouraged regular attendance by the weavers, and partly because village women engaged in weaving as a side job. The cheap labor available in rural areas, a feature related to the difficulties with labor management in early factory organizations, is, of course, an important reason for the choice of the relational contracting system.

The heterogeneous nature of cloth products, which makes it difficult for a centralized factory to reach minimum economies of scale in production, is yet another reason for selecting the putting-out system over the factory system. In these circumstances, it could be more efficient to put work out to agents who specialize in certain types of products. This was actually the case in Banshu, as well as in the garment industries in the Philippines and Thailand. In general, a workshop deals with only certain kinds of products.

Note that these are the merits of the relational contracting system when compared with centralized production, not those of the putting-out system alone.

Current Developments in China and Southeast Asia

The Japanese experience points out that hold over the products is a key determinant of the choice of contractual modes. Let us expand this argument into the textile industries in other East Asian countries (see tables 10-1 and 10-2).

In the garment industries in the Philippines and Thailand, the urban principals (modern garment factories or wholesalers) supply precut cloth to rural agents (rural entrepreneurs). The urban businesses in the garment industry generally have better access to market information on product specifications than the rural agents. Accordingly, when the urban businesses choose to "buy" rather than "make," the putting-out system (I) is a rational consequence for both principals and agents (Proposition 1).

In the Chinese garment industry, in contrast, although the urban principals (state or foreign garment factories) have hold over the products, they do not advance materials or

cash to the agents (township-village enterprises as the rural entrepreneurs), but let them purchase cloth from designated sources. The materials contain market information on product specifications. In China, however, it is the urban principals that suffer from working-capital constraints. To accommodate these constraints, the advance-order system (II) is adopted instead of the putting-out system (I), as predicted in Proposition 1.

In the weaving industries investigated in this volume, diverse situations concerning hold over products, and hence different contractual patterns, are observed. While the advance-order system (I) is widely practiced in northern Thailand, the putting-out system (I) was employed in Iruma and Banshu in Japan. In Punggi, Korea, the putting-out system (II) and the advance-order system (II) have coexisted since around 1960, but spot-market transactions were prevalent in the 1950s. In discussing this diversity, two attributes of woven cloth need to be considered: plain versus twilled cloth and yarn-dyeing versus piece-dyeing methods.[7] Although either dyeing method can be employed for plain cloth, twilled cloth is woven only with dyed yarn. Plain cloth requires less specialized weaving skills than twilled cloth.

The Thai rural entrepreneurs/weavers are skilled at weaving twilled cloth with the traditional, intricate patterns of the region. Their skills for twilled cloth are hardly standardized, and the weavers thus have strong hold over their products, which are sufficiently differentiated to maintain market competitiveness. Therefore, the Thai weavers do not have to rely on urban businesses to obtain market information on product specifications. In addition, the rural entrepreneurs do not suffer greatly from working-capital constraints, which is made clear by their habit of requesting cash advances from urban wholesalers only in the case of bulk orders. Nevertheless, they lack marketing skills, and the advance-order system (II) is consequently a rational choice in the Thai weaving industry (Proposition 2).

Other weaving industries examined in this volume produce plain cloth: Iruma and Banshu produced striped plain cloth, while Korea has produced white plain cloth since about 1960. A yarn-dyeing method and a piece-dyeing method, respectively, were thus employed. Under a yarn-dyeing method, dyeing, warping, and sizing are generally done by those who have hold over the products: local wholesalers in Iruma, and the principal-weaver in Banshu. Because principals supplied materials that embodied market information, the putting-out system (I) was adopted in Iruma and Banshu (Proposition 1).

Among the three case studies, piece-dyeing is practiced only in the Korean weaving industry. In the 1950s, the rural weaving entrepreneurs dyed cloth in their own facilities; the rural producers had hold over the products. Transactions were carried out in the spot market, because the market economy in Punggi was developed in the 1950s. Product standardization, however, was not crucial in the market, but it became imperative in the process of economic development. Product standardization reduces the transaction costs related to information asymmetry on product quality, and thus improves market efficiency. Nevertheless, it should be noted that a product standard is costly to develop, set, and enforce. Accordingly, standardization becomes economically possible only when market size expands enough to compensate the associated costs. Since around 1960, in response to the

growing need for product standardization, white cloth woven in rural workshops has been dyed in the dye-houses selected by the principals (urban wholesalers) to their specifications. It is now the urban principals who have hold over the products, because they are in the position to secure market information about fashion in the urban market. In Korea, the dyeing process is carried out by a third party, and no precise product specifications are offered to the agents by the principals. Therefore, the contractual modes observed in Korea since about 1960 are the advance-order system (II) and the putting-out system (II), depending on the financial positions of the agents (Proposition 2).

According to our taxonomy, the contractual modes adopted in the Thai and Korean weaving industries can be classified as the putting-out system (II). A sharp contrast, however, exists between them. Hold over the products is in the agents' hands in Thailand, while it is in the principals' in Korea. In the latter, no precise product specifications are given to the agents, because a third party is in charge of dyeing. This requires a more detailed taxonomy than we can undertake here.

In the context of agency theory, the Japanese rural entrepreneurs in Chapter 3 are regarded as principals whose agents are independent village weavers, while the Thai and Korean rural entrepreneurs in Chapters 6 and 8 are regarded as agents whose principals are urban wholesalers. Contractual relations in the former are described as the putting-out system, while in the latter they conform to the advance-order system. This contrast is primarily a product of the different stages of market development in the two countries. In industrializing Japan, urban businesses had not grown enough to expand their marketing channels into rural areas, and urban markets did not demand product standardization. Therefore, rural merchants played an important role in marketing rural products to urban consumers.[8] In Korea (since around 1960) and in Thailand, urban businesses had vigorously infiltrated the rural areas; the markets were further developed and linked with the urban market, or even overseas markets, unlike the markets in Iruma and Banshu.

Let us turn to the second question on the choice between spot-market transactions and relational transactions. As expressed in Proposition 2, hold by rural producers over products is a necessary condition for the prevalence of spot-market transactions. This condition was met in the three industries examined in this volume: Iruma before 1890, the Korean weaving industry in the 1950s, and the Thai weaving industry. In Iruma and Punggi, cloth was sold in the spot market. In Thailand, the advance-order system (II) is prevalent.

This contrast can be explained by the quality of the products and the difference in geographical distance to urban centers. Commercial activities had already spread in Iruma in the latter half of the nineteenth century, and in Punggi in the 1950s, although their products were inferior in quality and sold mainly in local markets. The Thai rural weavers wove for home consumption and rarely marketed their products, although they would have had a strong competitive edge if they had been sold in urban markets. The market economy did not emerge in Thailand until the advent of the advance-order system. In addition, Thai cloth is now mostly consumed in Bangkok and in overseas markets far from the production areas. Therefore, the advance-order system (II) is beneficial for both parties

in northern Thailand. The weavers' marketing difficulties can be overcome by the system, while the urban principals can largely reduce the transaction costs associated with the procurement of products from weavers who live in remote villages.

In summary, a comparison of these case studies reveals that the relational contracting system can appear in a variety of modes; the method selected depends on hold over products, working capital constraints, and the stage of market development. Altogether, the investigation supports the working hypothesis of Hayami in Chapter 1: the relational contracting system, rather than spot-market transactions or vertical integration, facilitates the wide diffusion of industrial and commercial activities over rural areas.

Dualism in Legislation and the Relational Contracting System

Institutional arrangements, especially legislation, governing the labor market and factory organizations play a decisive role in shaping the modes of production organization. Developing countries today have much stricter legislation governing economic activities than developed countries experienced during their early stages of economic development. In Japan, for example, the first labor act (Factory Act) was enacted in 1911 and was in force in 1916. The act, however, regulated only minor areas of labor conditions. A full-scale Japanese labor law was not enacted until 1947. Note that Itoh and Tanimoto studied the Japanese weaving industry in the prefactory era.

Laws protecting labor were enacted in developing countries at earlier stages of industrialization than had been the case in the developed world. These legislative restrictions, however, are mainly confined to the formal sector, and the informal sector is often outside the legal framework or does not comply fully with the laws. This dualism in legislation makes the effective labor costs of the informal sector much lower than those of the formal sector, as discussed in the Philippine and Thai studies. Consequently, dualism in legislation promotes efforts by large factories to contract work out to establishments smaller than those regulated by legislation.[9] We need to mention here only the following five major elements of dualism in legislation.

FLEXIBILITY. Enterprises in the formal sector have institutional buffers that absorb fluctuations in the size of the work force according to changes in business conditions. Temporary workers, including part-timers, dispatched workers, and apprentices, are often subject to employment adjustments during recessions. Subcontracting part of production is another means of achieving flexibility; the need to achieve such flexibility, of course, depends on the labor laws of the respective countries.

The following serve as good examples. In Thailand, the difference between permanent and temporary employees was recently eliminated by Interior Decree No. 11. While many temporary workers were transferred to permanent status, large factories began to contract work out to smaller enterprises on a large scale (Sungsidh and Poonpanich 1994). In India, factories subject to laws regulating work conditions are defined as those

employing ten or more workers if using power, and twenty or more workers if not using electricity. As a result, an increasing proportion of establishments employ nine workers, and the practice of contracting work out to such establishments is increasing (Papola and Rodgers 1992).

FEMALE LABOR. Most of the labor acts in Asian countries have special provisions regarding the protection and welfare of female workers, including maternity leave, separate welfare amenities such as child care, and prohibition of their employment during night hours and in dangerous and heavy operations. These provisions make the effective labor costs of female workers higher than those for male workers. This has prompted the practice of contracting work out, especially in female-dominated industries.

In India, for example, the existing factory act promulgated in 1948 stipulates comprehensive provisions covering the health and welfare of female workers. Previously applicable to factories employing more than fifty workers, in 1976 the act was amended to cover factories employing more than thirty. In order to evade the factory act, large factories began to rely increasingly on the relational contracting system (Malavika 1987).

LABOR UNIONS. The capital-labor relationship is one of the core influences on the modes of production organization. In this sphere, developing Asian countries present diverse conditions. Labor unions in the Philippines provide a good example. Strict restraints on employment retrenchment brought about by the strong presence of labor unions in the Philippines draw a different picture of the relational contracting system from that in countries where labor unions are relatively modest or nonexistent. A collective bargaining agreement in a modern garment industry in the Philippines near Metro Manila, for example, has the following clause concerning lay-offs: "where both temporary, casual probationary and trainee and regular employees are present, such temporary, casual, probationary and trainees shall be laid off first and the regular employees shall be retained." In countries where the employment of core workers is guaranteed by strong labor unions, it is rational for the modern factories to maintain a buffer work force to cope with demand fluctuations. Consequently, the work force is divided into insiders (union members), whose employment is protected by job-preserving measures, especially labor unions, and outsiders, who are not under such protection.[10] Workers involved in the relational contracting system are typical outsiders. The dualism created by labor unionism makes it costly to increase insiders in the modern factory; unionized factories are thus induced to contract work out to small enterprises that are not unionized.[11]

TAXES: Tax legislation varies significantly from one country to another. In Thailand, the business tax was recently replaced by a value added tax that exempts small enterprises.[12] In the Philippines, manufacturing enterprises that employ fewer than twenty in rural areas are exempted from major taxes for five years after registration (in accordance with the Magna Carta for Countryside and Barangay Business enacted in 1990). Such a differential tax system encourages large enterprises to contract work out to smaller enterprises.

LICENSING. The licensing or preferential allocation of quotas for exports to privileged establishments in the urban formal sector creates another form of dualism in legislation. Where such dualism exists, it certainly facilitates the relational contracting system, as is the case in China (see Chapter 7).

A Long-Term View

As pointed out by Hayami in Chapter 1, enterprises operated by rural entrepreneurs under the relational contracting system survive in Japan today; they have transformed their organizational features to adapt themselves to the modern industrial environment. The major textile zones of postwar Japan, for example, have developed in areas where the traditional textile industries once prospered (see Chapter 3). This historical continuity can also be observed in the Korean case in Chapter 8, where the handloom weaving industry evolved into the modern weaving industry with the installation of electric looms in the second half of the 1960s, and even air- and water-jet looms in the 1980s. More noteworthy is that in both countries these industries still rely greatly on the relational contracting system.

The question we must consider here is whether there are indications that the rural textile industries of contemporary East Asia will evolve into modern enterprises in the course of economic development. We briefly examine this possible evolution from the viewpoint of the introduction of formal labor management into rural enterprises, because one of the advantages of these enterprises is thought to rest on their informal labor management. Second, we touch upon the choice between the relational contracting system and the inside contract system that prevailed in the West during the early stages of economic development.

Historical Continuity

A predominant feature of the rural textile workshops in the Philippines and Thailand is the absence of any significant arrangement of the management hierarchy. Middle managers for supervision are virtually absent in rural workshops, partly because the employees are suspicious about being supervised by fellow villagers, and partly because appointed supervisors are reluctant to supervise fellow villagers. Instead, the entrepreneur-managers, who usually work side-by-side with their employees, exercise a substantial degree of control over labor.

Informal labor management under a simple hierarchy is found to be an advantageous feature of the rural workshops. At the same time, however, it imposes restrictions on the number of employees, partly because an entrepreneur-manager can supervise only a small number of workers, and partly because a collective responsibility, such as a peer group sentiment, can be effectively fostered among a small number of homogenous workers. As shown in Chapters 5 and 6, the number of workers in the average workshop in the Philip-

pines and Thailand is as low as ten to fifteen. Some of the rural entrepreneurs were found to have little intention of expanding their businesses because of possible difficulties in managing a larger number of workers.

In the progress of organizational forms of production identified by mainstream historians, the relational contracting system (especially the putting-out system) is often seen as a transition phase from the craft workshop or the guild system to the factory system, or a phase of proto-industrialization. Experiences in Japanese textile industries demonstrate historical continuity between rural industries and modern industries. From this perspective, the immediate question becomes how rural enterprises involved with the relational contracting system evolve into modern factory organizations in the course of economic development. Can we expect similar continuity in the rural enterprises in developing countries today?

This question is deeply connected with a fairly general agreement that the socioeconomic-economic conditions that have sustained the management of rural workshops through community relationships will decline in the course of economic development. Our studies of the Philippines and Thailand (Chapters 5 and 6) serve as evidence of this. In these countries, the erosion of both social norms and the cohesion in rural society are observed. Such erosion can be explained primarily by differing levels of exposure to an urban economy. The rural workshops that are most exposed to an urban economy, such as the Philippine workshops and cases GF and GH of the Thai chapter, have transferred elements of the factory system into their workshops. Another example occurs in weaving workshop F of the Thai study. It institutionalized labor-management practices specific to the modern factory system, such as the time-rate wages and promotion practices, although not because of urban exposure.

The point is that labor management in the factory system is not necessarily incompatible with that in the rural workshops, and rural entrepreneurs have eminent potential for incorporating the characteristics of modern factory organizations.

The Relational Contract and the Inside Contract Systems

The inside contract (or internal contracting) system was used extensively in Britain, Japan (Littler 1982), and the United States (Buttrick 1952; Chandler 1977) in the nineteenth century, before the transition to bureaucratic factory organizations. The two major forms of the contracting system, the putting-out and inside contract systems, bear a close resemblance to one another. A comparison between them will help us to understand the functions of the relational contracting system in a new light.

Although the inside contract system varied among industries, over time, and across countries, the primary form of the system was as follows. According to Buttrick (1952: 205), "under the system of inside contracting, the management of a firm provided floor space and machinery, supplied raw materials and working capital, and arranged for the sale of the finished product. . . . They [inside contractors] hired their own employees, supervised the work process, and received a piece rate from the company for completed

goods." Inside contractors worked as agents of the manager-owners of the enterprises. When compared with the putting-out system, the only major difference is the working sites of the agents. Both systems are decentralized forms of production; the employment relationship is constructed around the agents, inside contractors, and rural entrepreneurs. Discussion of the inside contract system in comparison with the putting-out system may provide an answer to the question addressed in Chapter 3: why wasn't the putting-out system prevalent in Europe and North America, despite its several advantages?

Chapter 6 on Thailand revealed that the absence of trained manpower for middle management in large factories during the early stages of economic development is a cogent reason for decentralized responsibility in the form of the relational contracting system. In this context, the inside contract system can be an alternative to the relational contracting system. As many historical studies have proven, the inside contract system reflects the managerial difficulty associated with direct employment relations, as can be seen in the following quotation: under the inside contract system, "responsibility, risks and costs should be partly shifted on to contractors, thus creating greater flexibility in circumstances where managerial skills and knowledge of work operations were limited" (Thompson and McHugh 1990: 53). By relying on the inside contract system, the "capitalist . . . was freed from most of the technical problems associated with production, improvement of the manufacturing process and labor supervision" (Buttrick 1952: 207). Accordingly, it can be said that the inside contract system in Western countries worked as a substitute for the relational contracting system. It can be assumed, therefore, that both the inside contract system and the relational contracting system are middle-management-saving devices.

The question, therefore, is why the inside contract system was more prevalent than the relational contract system in the Western world. Population density, as suggested by Itoh and Tanimoto (Chapter 3), could be a main reason. Another reason could be the village community as it functions in developing Asian countries. This is, as pointed out in many chapters in this volume, an important economic resource for efficient production in rural industries. In order to utilize such a resource, relational contracting is instrumental. In the West, economic development started after the demise of the village community.[13] Therefore, in the absence of a resource associated with the village community in the rural economies of the West, the relational contracting system with rural producers is not advantageous for utilizing rural resources.

The Rural Garment Industry in the Philippines and Thailand

In this section, we compare the rural garment industry in the Philippines and Thailand, where the putting-out system is commonly practiced. These two case studies contain relatively more and similar sets of information on the industry today, enabling a comparison under a condition close to ceteris paribus. It is expected that such a comparison will give us further insights on the organizational characteristics of the rural textile industries.

Observed Commonalities

The case studies in the Philippines (Chapter 5) and Thailand (Chapter 6) reveal common characteristics of the rural garment industry. First, the development of modern garment factories at urban centers has induced the evolution of many garment workshops in rural areas through the diffusion of putting-out arrangements. Second, this evolution of the rural garment industry has been pushed by rural entrepreneurs who, emerging mostly from the peasant class, can seize the opportunities created by economic development through mobilizing and organizing rural resources, capital and labor in particular. Third, an important condition for those who become entrepreneurs is that the entry barrier to the industry is low, not only because of the low fixed capital requirement to set up a rural workshop, but also because the putting-out system lowers the information requirements on marketable products and makes financial management a secondary consideration. Fourth, a major reason that garment firms in urban centers adopt the putting out system, despite the inherent disadvantage in the maintenance of quality standards, is that it can reduce labor costs, either by using rural labor of low opportunity cost or by avoiding the tight labor regulations enforced in the formal sector—or both. Fifth, the rural garment industry as it has evolved has contributed to creating productive employment opportunities in rural areas for those who would otherwise work in less remunerative jobs, migrate to urban centers to seek jobs, or remain unemployed.

In spite of these basic commonalities, however, there are also intriguing differences between the garment industries of the two countries. We first enumerate the major differences observed in the studies and then try to explain why such differences have emerged.

Observed Differences

Of the many observed differences, the most salient and interesting may be the following.

1. *Worker experience in the modern garment industry.* While most of the rural entrepreneurs (leaders) and sewers in Thailand have previous work experience in modern garment factories, many of those in the Philippines (although some had such experience) were novices when they entered the industry.
2. *Education and class background.* In the Philippines, a clear difference exists in educational background between the rural entrepreneurs and the sewers: the former are mostly college graduates, while the latter are primary school graduates or high school drop-outs. In addition, while the sewers are from the bottom stratum of rural society, the rural entrepreneurs are either from the farmer class or from the landless worker class; the former source provides the largest number. In contrast, both Thai leaders and sewers are primary school graduates from the bottom stratum of rural society.
3. *Contractual relationships.* In the Philippines, there are rural entrepreneurs who freelance and change exporters/contractors frequently. On the part of sewers, the behav-

ior of getting a cash advance and running away was observed. In Thailand, no such behavior was found: the associations between the urban principals and the agents (rural entrepreneurs) and between the rural entrepreneurs and the sewers are both stable and self-perpetuating.

4. *The mode of labor management.* The association between subcontractors and sewers, or the nature of labor management in rural garment workshops, demonstrates a sharp contrast between the two countries. Absenteeism and a high turnover among sewers caused by job-hopping are major complaints of the Philippine rural entrepreneurs, while these problems are not serious in the Thai garment workshops. In Thailand, informal labor control, based either on a peer group or on a patron-client relationship, is presumably effective. In contrast, more formal control seems necessary in the Filipino rural entrepreneurs' workshops.
5. *Workshop sewers and home sewers.* In Thailand, the rural entrepreneurs (leaders) depend more on home sewers. They are considered employees of the rural entrepreneurs (leaders) rather than independent workers under putting-out arrangements. In the Philippines, although there are rural entrepreneurs who "employ" home sewers, they are of less importance in garment production than they are in Thailand.
6. *Aspiration of rural entrepreneurs for upward mobility.* Some Filipino rural entrepreneurs have a strong desire to move up to the exporter/contractor level. Some started their careers in the industry as sub-subcontractors. In contrast, no sample rural entrepreneurs in Thailand express such aspirations. Most hesitate even to expand their businesses because of possible increasing difficulties in labor management in proportion to the number of workers.
7. *Ownership of production tools.* The rural entrepreneurs in the garment industry in the Philippines must own high-speed sewing machines in order to employ sewers. In Thailand, the rural entrepreneurs can employ sewers who have their own sewing machines. The weaving leaders in Thailand, however, have to install handlooms to enter the weaving business.
8. *Government intervention.* Both the Philippine and Thai governments have implemented policies intended to foster rural industries; the provision of institutional loans to rural entrepreneurs is the most typical. These policies appear to be more effective in Thailand than in the Philippines. Many Thai rural entrepreneurs (leaders) in the weaving industry obtained such institutional loans to acquire handlooms, but the number of rural entrepreneurs in the Philippines who received such loans is quite limited. At the same time, few rural leaders in the garment industry in Thailand receive such loans. This is because they can employ sewers who already have their own sewing machines. In contrast, the weaving leaders have to lend handlooms for fabrics of double width without charge, since traditional handlooms are generally for fabrics of a single width, which do not have a large market. As long as the garment leaders in the Philippines have to own high-speed sewing machines in order to employ sewers, a credit service will be an effective step in the formation of garment groups.

Factors Behind the Differences

Many factors were involved in bringing about the differences mentioned above; they will not all be discussed in detail here. Nevertheless, a brief listing of the elements that generated the differences, either independently or in concert, will include the following.

GEOGRAPHICAL DISTANCE FROM AN URBAN CENTER. Laguna, the study area in the Philippines, is adjacent to Metro Manila; in travel time, the distance is only one hour (Laguna I) to three hours (Laguna IV). The northern region of Thailand, in contrast, is about 600 kilometers from Bangkok, and there are no large cities in between. Bangkok, like Metro Manila, is the center of consumption in the country, and most export agents have their offices there.

This difference in geographical distance from the market center no doubt has profound impact on the organization of the garment industry. For instance, information on product markets is most important, but also most scarce, for the rural entrepreneurs in the garment industry. In Laguna, however, it is not entirely impossible for rural entrepreneurs to obtain the information on exporters by contacting them directly. In northern Thailand, the long distance from Bangkok makes it nearly impossible for rural entrepreneurs to gather such information. As a consequence, the urban principals play the vital role of linking village producers with urban markets: only through the urban principals can the rural entrepreneurs secure the information. Such a situation makes the rural entrepreneurs more subordinate to the urban principals and renders their relationship more stable and long-lasting. The different patterns of the ownership of production tools is another illustration of the difference in geographical distance from an urban center. The labor market in the Philippines case is stiffer than in the Thai case. Close proximity to Metro Manila provides alternative job opportunities, and the Filipino garment subcontractors must have high-speed sewing machines to attract and employ competent sewers. The Thai garment leaders, in contrast, can employ sewers who have their own sewing machines, exploiting their relatively favorable bargaining position in a labor market where job opportunities are scarce. It is worth noting that the rural entrepreneurs in the most remote towns in Laguna have a mode of operation similar to that found in Thailand.

These findings suggest that to understand what is required to promote rural industrialization in remote areas, it is necessary to study the roles played by individuals such as the urban principals in northern Thailand: they are the change agents who intermediate critical market information between the centers/outside world and rural entrepreneurs.

BEHAVIOR OF FEMALE WORKERS. Thailand is well known as a country with an exceptionally high rate of female labor participation. A considerable portion of the newly supplied work force for labor-intensive industries, particularly in unskilled occupations, is women from rural areas. There is, however, a clear tendency for these female workers to return to their home villages after marriage or after delivering a child.[14] It appears that the notion that a married woman's place is at home remains the social norm. Therefore, in rural villages

there are many returnees who were line supervisors or sewers in modern garment factories. They create a large reservoir of sewers and rural entrepreneurs (leaders) for the rural garment workshops. As revealed in the Thai study, almost all leaders and sewers are married women. This naturally makes them immobile, both geographically (less job-hopping) and vertically (less aspiration to move up). The gender division of labor and limited market demand for female labor in rural areas make home manufacturing one of the few ways that rural women with family responsibilities can supplement family income.

The labor participation rate of females is quite high in the Philippines as well, but the social norm of women staying at home after marriage is much weaker, even nonexistent. In other words, gender segregation in the Philippines is not as distinct as in Thailand.[15] Therefore, modern garment factories in Metro Manila and the surrounding area are full of married sewers. This is a major reason that the turnover rate of sewers in modern garment factories is almost zero in the Philippines.

WAGE DIFFERENTIAL BETWEEN PROTECTED AND UNPROTECTED SECTORS. The two case studies reveal that lower labor costs in rural areas are behind the diffusion of the putting-out system in the garment industry. It must be noted, however, that there is a marked difference between the two countries in the wage differential of modern factories and rural workshops. In the Philippines, the wage rate for sewers in modern factories is more than twice as high as that in rural workshops, while the wage gap is not as distinct in Thailand.[16] This does not mean that the labor cost advantage in garment production under the putting-out system has disappeared in Thailand. The advantage can still be utilized if the transaction costs associated with hiring—such as fringe benefits for sewers under well-enforced labor regulations in the modern sector and monitoring costs for labor efforts—are taken into consideration.

This raises the interesting question of what can explain the difference in the nature of the dualism in the labor market of the two countries. But, setting aside this question, it would explain, at least in part, the differences in the association between the rural entrepreneurs and the sewers and in the mode of labor management of the rural entrepreneurs. With the large wage differential in the Philippines, it is reasonable to observe frequent job-hopping by sewers from rural workshops to modern garment factories. In contrast, with the relatively negligible wage differential in Thailand, there is little incentive for Thai sewers to switch jobs. This brings about more stable associations between the rural entrepreneurs and the sewers. Note the opposite directions of labor mobility in the two countries. In the Philippines, the sewers working in rural garment workshops try to secure employment in modern garment factories, while in Thailand, the village sewers are generally returnees from modern garment factories.

It would be appropriate to mention that some Thai garment leaders, such as GH, face the same difficulties in managing sewers as Filipino subcontractors do. This is because workshop GH is located in a town and must recruit workers from remote villages. It resembles the Laguna rural entrepreneurs in many respects. Laguna is a province with relatively high wage rates, partly because of its proximity to Metro Manila and partly because

of its high agricultural productivity. Some rural entrepreneurs there recruit sewers from remote regions where wage rates are lower, with the expectation that loyal and patient sewers can be obtained from this population. In many cases, however, these sewers begin job-hopping after working for a time at the rural entrepreneurs' workshops in Laguna.

ROLE OF EDUCATION. In Thailand, the social differences between the rural entrepreneurs (leaders) and their sewers are insignificant. Both are from the bottom stratum of agrarian society and they have the same educational background (primary school graduates). The group cohesiveness among them is, therefore, relatively strong, and the strong sense of membership in a peer group is conducive to making informal labor control more relevant than the formal controls common in Thailand, and here lies the comparative advantage of rural household enterprises over large modern factories.

Conversely, in the Philippines, there is a large difference between the rural entrepreneurs and their sewers. Although some rural entrepreneurs come from well-to-do rural families with some land and assets, there are also some rural entrepreneurs whose family backgrounds are as humble as the sewers'. It cannot be said, therefore, that the rural entrepreneurs and the sewers are from different social classes in the village communities, but there are large differences in education between the two groups. Most of the rural entrepreneurs are college graduates, while the sewers are mostly primary school graduates or high school drop-outs. Because pseudo-social classes are created by differences in education in the Philippines, such a large difference in educational levels would result in a social cleavage wide enough to weaken group cohesiveness when compared to the Thai cases. This may be a factor behind the need for more formal labor controls in the rural workshops, as indicated by the "rules and regulations" reproduced in the Philippines chapter. Such rigid factory regulations are found only in modern factories in Thailand, as shown in the Thai chapter.

The differences in education of the rural entrepreneurs might be a significant factor behind the differences in the aspiration levels and upward mobility of the entrepreneurs in the two countries. The enrollment rate in the tertiary level of education is about 30 percent in the Philippines and about 15 percent in Thailand. With a smaller percentage of people going on to the tertiary level, college graduates in Thailand are the elites of society and, coupled with the rapid economic development in recent years, which increases the demand of the modern sector for a highly educated work force, it is improbable that a college graduate would take a job in an industry such as garment subcontracting in a rural area. College graduates in the Philippines are also members of an elite group, but in a greatly diluted sense, and the unemployment rate is higher for those of the age of college graduates.[17] In such an environment, it is not at all unusual for college graduates to go into the garment subcontracting business. The presence of a ladder toward becoming exporters should make the profession even more attractive to college graduates. To the extent that a college education fosters wider perspectives and higher aspirations among the students, as described in the chapter on the Philippines, it is reasonable to expect that the aspirations of the Filipino rural entrepreneurs are higher than those of Thai rural entrepreneurs, who have only primary educations.

SOCIAL/CULTURAL NORMS AND COHESION OF RURAL SOCIETY. As mentioned above, the comparative advantage in labor management of rural household enterprises over modern factories in Thailand rests partially on the strong cohesiveness of rural societies. This cohesiveness is instrumental in forming either strong peer groups or patron-client relationships among the people involved in the rural garment industries. In contrast, the nature of the association between the rural entrepreneurs and sewers in the Philippines makes it necessary to employ more formal labor controls.

It may be adequate to point out here that such an advantage depends not only on the cohesiveness of the society but also on the factors explained so far in this section. In other words, it may be misleading to overemphasize the strong social cohesiveness in the Thai case relative to the social conditions in the Philippines. The Thai expression *kreng jai*, meaning "caring and consideration," connotes in Thai culture the spirit of getting along well with other people, or a kind of social norm among people to do so. Such a spirit in rural society makes informal control in rural workshops superior to the formal control in modern factories, especially in the early stages of industrialization, when the system of formal labor control in factory organizations has not been fully established. A Filipino expression, *pakikisama*, meaning to have friendship with others or to be good to other people, has a connotation similar to *kreng jai*. Those who violate this social norm overtly are considered *warang hiya* (shameless persons) by others. In this sense, the societies of both countries share similar "Asiatic" cultural values, in spite of their different histories.

Another similarity between the two countries is that their societies are "loosely" structured, as described by Embree (1950) for Thailand. Such looseness in the societies is largely a reflection of resource endowments. In Southeast Asia, both Thailand and the Philippines are rather exceptional countries in that there were still land frontiers until recently because of favorable endowments of land relative to population (Hayami and Kikuchi 1981). As the population grew, people migrated to the frontiers when the pressure overwhelmed the available stock of land. In these countries, people in rural societies have thus been very mobile, which would have contributed to nourishing rural societies that are loosely structured.

It seems, therefore, that the two countries have more similarities than differences in social norms and degree of cohesiveness in rural societies compared with other societies in Southeast Asia. If this is so, the differences in the mode of labor management between the two countries should stem primarily from the different levels of cohesiveness of rural societies that result from geographical distance from the urban center and the associated differences in their labor markets and educations.

Notes

1. After dyed yarn is unwound from hanks, it has to be warped. Warping is a laborious yarn preparation task. Sizing is necessary to strengthen yarn.

2. Some economic historians who regard the putting-out system as a premodern, feudal arrangement may argue that the presence of a credit advance from the principal, or credit tying, is an essential feature of the putting-out system.

3. A similar situation was observed in the Korean weaving industry, as will be discussed below. The spot market in the 1950s was replaced by the relational contracting system in about 1960.

4. This section is based on Sasaki (1991). According to personal communication of the authors with Tanimoto, what took place in Iruma after the introduction of mechanical looms was quite similar to the events described by Sasaki in the weaving industry in Banshu.

5. In Iruma, only vertically striped cloth was woven.

6. On average, the weavers attended the workshop only about ten days each month.

7. In the yarn-dyeing method, dyeing is a preloom activity, while in the piece-dyeing method, it is a postloom activity.

8. According to personal communication with Tanimoto, in the later days the urban wholesalers joined in decisionmaking on the kind of products to be made with the local wholesalers. This seems to have come about because the urban businesses were able to acquire market information on product specifications. Note that this situation closely parallels the garment industries of the Philippines and Thailand, where the urban businesses have strong "hold" over the products.

9. It should be noted that the developing countries in Asia have enacted diverse provisions pertaining to factory workers. This leads to different patterns of production organization, including the relational contracting system. To inquire further into the matter as a whole is beyond the scope of this brief chapter.

10. On the insider-outsider theory, see Lindbeck and Snower (1988).

11. For further details on the labor market in the Philippines, see Ofreneo (1994).

12. Manufacturers, sellers, or providers of a service, who have annual gross receipts of less than 600,000 baht, are not covered by the value added tax.

13. This part of the statement relies on Ishikawa (1988).

14. For example, the ratio of married female workers in the rural food industry (N = 150) is 70 percent, while the ratio in the garment industry (N = 150) located in urban areas is as low as 43 percent. See Varnee and Jirapatpimol (1994).

15. For example, while in Thailand no male sewers and leaders were found, in the Philippines there are some male sewers and subcontractors.

16. In the Philippines, the minimum wage rate, which modern factories have to observe, is P145/day, whereas the wage rate paid by subcontractors is about P65/day on average, in spite of the longer daily working hours for the latter. In Thailand, the minimum wage rate is B106/day for factory workers, while the wage rate for sewers who have electric sewing machines is about B100/day; for those who have manual sewing machines, it is about B60/day. The exchange rate with the U.S. dollar is almost the same for the baht and the peso.

17. The unemployment rate in the Philippines in 1993 from the cohort twenty to twenty-four years old was as high as 19 percent, compared with 10 percent for the work force as a whole.

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11

On the Relevance of East Asian Experiences:
A South Asian Perspective

V. V. Bhatt

The East Asian experiences have been presented in great detail in this volume and summarized with elegant simplicity and lucidity by Hayami in Chapter 1. These varied experiences are interesting in themselves. Their significance, however, is not restricted to the countries concerned; they have relevance for other developing countries that are experiencing acute problems of rural underemployment and poverty. They at least suggest the feasibility of nonfarm rural industrial and commercial development, if it is organically linked with urban industrial and commercial growth. In this context, these experiences illustrate the effectiveness of relational contracting as a coordinating mechanism that links rural industry and commerce to urban-metropolitan and export markets.

The objective of this chapter is to indicate the relevance of these experiences to the South Asian countries, which face severe, inter-linked problems of poverty and underemployment and to present some Indian case studies of relational contracting.

The Relational Contracting Model, East Asian Experiences, and Economic Rationale of Coordinating Mechanisms

The stylized characteristics of the relational contracting model, as presented in Chapter 1 by Hayami, seem to be the following:

(a) There is a long-term contractual relationship—or the expectation of such a relationship—between the urban principal and the rural agents, based on economic ties and fortified by sociocultural or community norms and traditions.

(b) There is interlinking of contracts, as in the putting-out contract, which implies a contract for provision of materials and/or credit as well as guaranteed purchase of finished goods, or as in the advance-order contract, which interlinks the contract for purchase of finished goods with the contract for the provision of technical assistance and/or credit facilities.

(c) Transaction costs are reduced through mutual trust and confidence generated by (a) and (b). The enforcement of contracts generally does not require resort to legal mechanisms, although they are essential as a last resort.

Weaving Industry

How well do East Asian case studies reflect this model? The Iruma (after 1890) and Banshu (in 1910s) cases (Chapter 3) conform to the model very closely; in both cases, yarn was supplied by the principal to the rural workshops with a contract for guaranteed purchase of finished cloth. There was thus an interlinking of contracts. The merchants in Iruma and the principal weaver in Banshu were both located close to the rural workshops, and thus it is quite likely that there were both economic and social bonds between the principal and the agents.

In the weaving industry of Thailand, the weavers are highly skilled and their products already have a market; the principal (merchant) in this case places only an advance order. There is no interlinking of contracts; there are economic ties, but one wonders whether there are any community ties between the merchant and the weavers. In the Korean case of Punggi, there is interlinking of contracts because materials are supplied by the merchant with guaranteed purchase of the finished cloth, but social or community ties do not appear to be important. The second Korean case is similar to the Thai case: there are economic ties formed by the advance-order contract, but there is no linkage with either technical assistance or credit facilities. Social or community bonds do not seem to be important.

Garment Industry

In the case studies of the garment industry, the Thai and Philippines cases are similar in some respects. In both cases, materials are given by the principal to the agents with the contract for guaranteed purchase of the finished garments. The Thai case, however, corresponds closely to the relational contracting model—the rural entrepreneurs are trained in garment factories, and this seems to have built mutual trust, although there may not be any community bonds. Further, both rural entrepreneurs and sewers belong to the same social stratum and live close to one another in a rural area, and neither group has access to an alternative occupation. These characteristics may have created a social or communal bond, resulting in mutual trust.

The Philippines case is quite different. Most of the agents or entrepreneurs are located near a metropolitan area; are highly educated, although without much training in the garment industry; and aspire to become principals by directly obtaining export orders. The

sewers are also not trained as well as those in Thailand, they have no close social links with the entrepreneurs (because of differences in educational and economic status), and they aspire to work directly in metropolitan garment industries as sewers. Both economic and social ties are thus much weaker among principals, entrepreneurs, and sewers in the Philippines than in Thailand. For these reasons, no long-term, durable relationship, or expectation of such a relationship—which is the main characteristic of the relational contracting model—has evolved.

The Chinese case displays some characteristics of the relational contracting model. Advance-order contracting takes place between state enterprises and rural enterprises, and it appears that the state enterprises provide technical guidance as well as trained manpower. There seem to be some personal ties between the rural enterprise managers and managers in the state enterprises, because some of the rural managers probably worked in state enterprises in some capacity.

The evolution of this form of relational contracting does not seem to have relied on the economic logic of the practice. Instead, it is probably the result of the incentives for state enterprises to evade or avoid government regulations by engaging in contractual arrangements with rural enterprises. Once these regulations change and the state enterprise sector is restructured to function effectively and efficiently, the incentive for this kind of relational contracting may disappear, which renders the contractual arrangement unstable.

Further, most of the Chinese enterprises are located in or near two cities and are quite large compared with enterprises in the Philippines or Thailand. The organization of enterprises is more like that of the large urban garment factories in Bangkok or Metro Manila than it is like rural enterprises elsewhere, and in the absence of restrictive government regulatory policies, the scale of these enterprises would have permitted them to secure export orders directly, following the pattern of the large Thai and Philippine garment factories.

Thus, the nature and characteristics of relational contracting vary in different contexts. With the exception of the historical cases of the Japanese weaving industries and the Thai garment industry, the contractual arrangements in the other cases do not show *all* the characteristics of the relational contracting model. After all, a model captures only the stylized characteristics, and there are bound to be deviations from the model in actual cases. Further, as is shown in Chapter 10 by Kikuchi and Ohno, the contractual modes also differ by context, depending on the hold over products, working capital constraints, and the nature and size of the market.

Toyota Case

The Toyota case is much closer to the relational contracting model. The long-term relationship between the principal and parts suppliers was deliberately nurtured by the principal through advance-order contracts that are interlinked with technical assistance to the agents. There was a deliberate effort by the principal to forge close economic ties with the parts suppliers by encouraging them to locate near the main factory. This encouraged the for-

mation of close economic as well as community ties and bonds, which created an environment of mutual trust, facilitating not only the enforcement of contractual obligations but also fostering learning by parts suppliers through interaction with the principal, as well as among themselves.

The Toyota system was the outgrowth of the founder's experience as a manufacturer of automatic looms, which he supplied to the weavers. He had experienced the benefits of having close contractual relationships with the parts suppliers of automatic looms, and he had probably found that given training and technical guidance, even rural artisans can be trained in the manufacture of the sophisticated parts required by the car factory. This may have been the reason for his vision of "a pastoral factory" in Koromo, a rural town not very far from Toyoda's automatic loom enterprise. He was thus familiar with the region and the community.

Rice-Marketing Case

The rice-marketing case illustrates not only the entrepreneurial qualities among rural farmers and traders that come to the fore when transport costs are reduced and markets are expanded, it also shows that relational contracting is feasible in the trading sector. Although Kawagoe does not explicitly mention it, there *must* have been relational contracting arrangements within the hierarchy of traders or merchants. For example, wholesale merchants in cities or urban areas must have been linked through several chains of intermediaries to the retail merchants or agents of wholesalers who carried out the grassroots task of purchasing rice from the farmers. In such a case, there must have been advance-order contracting among the hierarchy of merchants. Such contractual arrangements are generally durable and long-term because of the code of behavior among merchants: a mercantile economy cannot expand without the mutual trust and confidence that is essential if merchants are to engage in credit transactions with one another. The bills of exchange involved may not offer any legal protection (Hicks 1969: Chapter 3).

In Japan, tradable rice drafts, which are similar to bills of exchange, were used, and there must have been a code of conduct for honoring such drafts (discounting them and the like). Without such a code, financial transactions among traders would not have been possible. These considerations seem to suggest that there were advance-order contracts among merchants, and this relationship must have been durable and built on a tradition of trust; otherwise, the credit transactions represented by rice exchange notes or rice drafts would not have been possible. A farmer would have been paid in cash, while credit transactions must have been used among the merchants. This inference is consistent with the historical experience of other countries (Hicks 1969). Thus, the rice-marketing case reflects the main characteristics of the relational contracting model.

Economic Rationale for Relational Contracting

Subcontracting by the principal to the agents can evolve only in industries with distinct and technologically separable production processes. In such industries—including gar-

ment making, weaving, automobiles, tractors, bicycles, and electronics—separate processes have different economies of scale. For example, some processes, such as market search for final products; designing, finishing, selling of finished products; and purchase of basic inputs, require specialized skills and/or specialized equipment, and hence have *economies of scale*. Such operations must be carried out on a large scale and located at urban-metropolitan centers. If the products have export markets and/or require imported materials, the obvious location would be a port, as in the Thai, Chinese, and Philippines garment cases. The principal thus has the advantage of large-scale operations.

Other processes or operations may have different scale economies, or may even be scale-neutral. To reap the advantages of scale economies, it would be advantageous to specialize. In order to gain the *economies of specialization or division of labor,* the principal thus has an incentive to enter into subcontracting relationships with the agents, who specialize in selected processes.

Such specialization improves efficiency in several ways. There would be learning by doing, with resultant identification of technical innovations that may reduce cost. The entrepreneurial incentive would be greater in such decentralized operations than in enterprises that centralize production under one roof, as in the vertical integration system.

Some processes may not require specialized skills and may be highly labor-intensive. If the opportunity cost of labor is low—in rural areas, for example—the principal would gain a cost advantage by forming subcontracting relationships with rural entrepreneurs. This can be seen in the Thai garment case. In Thailand, women had the skills and preferred to stay in rural areas and engage in operations that gave them flexibility in timing and hours of work, and their opportunity cost was thus lower than it would be in Bangkok. Further, the principal does not have to invest in premises and equipment and has lower labor management costs. In this fashion, the principal can enjoy economies that arise from choice of techniques or technology, depending on labor market conditions.

Subcontracting relationships also offer *economies of scope*. Production is flexible and can be adapted to changing demand conditions. This is particularly so in industries that produce not one product but several. The garment industry is known for products that are differentiated in design and does not produce one standardized product, but several products of different styles. Similarly, in the car industry, there are several models. The pattern of demand may change, but subcontracting enables the principal to adapt product mix to such changes.

The subcontracting system thus has *economies of scale, specialization, and scope* in addition to *economies arising from choice of techniques or technology*. Nevertheless, there are transaction costs, including transport costs. Contracts can never be complete, and there is always scope for implicit contracts. The initial costs of transactions in choosing subcontractors may be high, but they may not eclipse the economies of subcontracting. The problem is, how can the transaction costs arising from moral hazard and adverse selection be reduced further? There may be opportunistic behavior, cheating, and fraud. If the principal has to change subcontractors often and the agents must frequently change the principal, the transaction costs could be prohibitive. Both parties gain if the contractual arrangements are—or are expected to be—enduring.

The risk of opportunistic behavior can be minimized if both the principal and the agents choose their partners after repeated transactions. This experience would provide each party with enough information to make an informed choice, and asymmetry of information would be reduced. Further, the principal would have an interest in establishing long-term, durable relations with subcontractors. Otherwise, his own operations would be adversely affected, and he has an incentive to take a long-term view. Similarly, the agents would be risk-averse and hence would take a long-term view; otherwise, they would have no incentive to undertake the risk of investment.

With regard to the prisoners' dilemma game, it is shown that even if the game is played repetitively, treachery pays. Nevertheless, this result is valid only with the strong unrealistic assumption of what Simon calls *substantive rationality* (Simon 1981: 32). As he demonstrates, this assumption is implausible in the face of *bounded rationality*. When this assumption is relinquished, and when players are striving for a satisfactory rather than optimal payoff, the cooperative solution is likely to be stable, even for finite repetitions of the game (Simon 1981: 46).

This long-term relationship can be cemented by the interlinking of contracts. The principal can provide materials, technical assistance, or credit facilities along with the guaranteed purchase of the product. It is easier to develop long-term relationships when both principal and agents share common sociocultural or community values and are linked by economic as well as sociocultural ties. Such long-term relationships create mutual trust and confidence, and thus reduce transaction costs (Arrow, 1974: 23–25). Relational contracting cannot evolve without such mutual trust and confidence in one another's integrity.

Inside Contracting

Inside contracting, which was prevalent in the United States in the late nineteenth century (Buttrick 1952), can also be considered as a form of relational contracting. The principal in this case provides not only materials, but also floor space and equipment to the agent; the agent is responsible for the technical aspects of production as well as recruitment and management of labor and receives a piece rate from the principal for completed goods. The relationship is based on mutual trust, because the principal chooses the agent on the basis of the agent's past performance, possibly as a worker. The agent has an incentive to be efficient and reliable because his continuing employment depends on his performance.

This kind of relational contracting can evolve when there are economies of scale, not only in the design and marketing processes, but also in raising the necessary finance from banks or the capital market. Apart from these scale economies, the principal has an information advantage: since the agent is located close to the principal, the latter can easily detect any signs of opportunistic behavior. Thus, there is adequate assurance of the quality of the product. The Indian garment industry case presented later in this chapter shows that insider contracting is relevant even now, when the associated additional economies are significant.

Italian District Model

A variant of relational contracting has evolved to what has come to be known in the literature as the Italian District Model. It has the following characteristics:

- A cluster of primarily small and medium-size enterprises is spatially concentrated and sectorally specialized.
- Relational contracting between the principal and agents is based on economic ties, buttressed by strong social or community ties or a sociocultural identity that facilitates and promotes mutual trust.

Such clusters, for example, have evolved in Emilia Romagna region of Northern Italy (Rabellotti 1995) and in the Sinos Valley in Brazil (Schmitz 1995). Both clusters have specialized in the shoemaking industry, which is labor-intensive, like other traditional industries such as weaving and garment making.

The Italian District Model also has all the economies associated with relational contracting. In addition, such a cluster has *external economies or economies of agglomeration*, first discussed by Marshall in his *Principles* (Marshall 1920). These economies relate to the market for skilled workers, knowledge spillovers, and learning by interaction among firms. It is difficult to keep any market or technical secrets in a cluster like this, and the resulting external economies improve the collective efficiency (Schmitz 1995) of the whole cluster. Further, the cost of opportunistic behavior is heavy. Each firm's performance of their contractual obligations would be readily known, and those indulging in opportunistic behavior would suffer a loss of reputation and a consequent fall in orders, which could easily lead to the failure of the enterprise. The business code established in the cluster—an outgrowth of social and cultural ties—prevents such behavior. Such clusters are likely to evolve in a marketing center located in rural areas in the rural-urban continuum, as the experience of Italy and Brazil demonstrates.

Of course, when the industries concerned lose their competitive advantage in the international market, the location of production could shift to other areas. For example, Italy and Brazil faced severe competition in the North American market in the 1980s from East Asian countries with relatively low labor cost. Further, Italy has specialized in classic leather shoes, while the demand pattern had changed in favor of synthetic tennis shoes made in Korea, Taiwan (China), and Hong Kong (China) (such shoes were also imported by Italy). Both Italy and Brazil had to shift to the production of higher-quality shoes for the elite market. Relational contracting modes had to change in order to adapt to this shift.

It is useful in this context to refer to the New York experience. By the turn of the century, New York City was the center for garment making and distribution in the United States. After World War II, the industry was relocated to the southern states of the United States. Two decades later, the production centers shifted to East Asian areas such as Korea, Taiwan (China), and Hong Kong (China), and later to China and South Asia as well. New York still has a competitive edge in garment marketing and design, which has consider-

able economies of scale. Indeed, much of the current production in Asia originates as an idea or an order in Manhattan (Hansen 1996).

It appears from historical and current experience that with the expansion of the market, highly skilled activities such as weaving and shoemaking do tend to form clusters, in part because of *economies of agglomeration* and the consequent improved access to marketing channels. It is quite likely that such clusters in the weaving industry evolved in marketing centers in Iruma and Banshu. The Indian case of the garment industry presented later also shows the development of a cluster in a marketing center. The weaving industry of northern Thailand also appears to have evolved as an industrial cluster.

In modern industries such as the production of automobiles, tractors, and bicycles, clusters of parts suppliers form around the principal. The Toyota case is an illustration of such a cluster, as are the Indian cases of tractor and bicycle production presented later in this chapter.

Rationale for Nonfarm Development in South Asia

With the current rate of increase in population and the extent of underemployment, the South Asian countries face a severe employment problem. The annual growth rate of the population in the region is more than 2 percent. In Pakistan, it exceeds 3 percent, while in Bangladesh, it is more than 3 percent, and in India it is 2.2 percent. The landless and small marginal farmers form more than 30 percent of the rural population in both India and Bangladesh, and 20 percent in Pakistan. As a result, rural unemployment and underemployment involves 35 percent of the rural work force in India, 60 percent in Bangladesh, and 15 percent in Pakistan. The proportion of rural population below the poverty line is quite high: 35 percent in India, 50–60 percent in Bangladesh, and 10–12 percent in Pakistan (table 11-1).

The purely agricultural sector cannot absorb the surplus manpower. Instead, this surplus leads to fragmentation and subdivision of agricultural holdings and to an increase in landless labor, which adversely affects agricultural productivity and intensifies poverty (Singh, 1990: Chapters 1–3).

The modern industrial sector, even if it grew at an annual rate of 10–15 percent, cannot create employment opportunities at the rate required to absorb the burgeoning work force because it is small and the technology is capital-intensive (Bhatt 1973: Chapters 3–4; Singh 1990: Chapters 6–7). Further, because of large-scale rural underemployment, there is considerable migration from rural areas to the urban areas in search of employment, which aggravates the problems of urban congestion and leads to open urban unemployment and social, economic, and political tensions and conflicts. For example, twenty-three cities in India have a population exceeding one million and experience severe strain on the urban infrastructure—drinking water, sanitation and hygiene, housing, and intracity transport. To extend this infrastructure would probably be much more costly—both from the economic and social points of view—than to improve the infrastructure—roads, transport,

Table 11-1. South Asia: Basic Economic Characteristics

Item	*India*	*Pakistan*	*Bangladesh*	*South Asia*
A. *Population*				
1. Total population: (1989; millions)	832.5	109.9	110.7	1,156
2. Population, annual growth rate (percent), 1980–90	2.2	3.1	2.6	2.3
3. Urban population, proportion of total, 1989 (percent)	27	32	16	n.a.
4. Annual growth rate of urban population (percent), 1980–89	3.8	4.6	6.6	n.a.
5. Rural population: proportion of total (percent), 1989	73	68	84	n.a.
6. Annual growth rate of rural population (percent), 1970–79	1.88	3.0	2.40	n.a.
7. Rural population per square kilometer of agricultural area	345	280	990	n.a.
B. *Employment and poverty in rural areas*				
1. Rural households: landless and small, marginal farmers, proportion to total (percent), 1985	33	20	32	n.a.
2. Open rural unemployment: proportion of total population of working age (percent)	6.7	2	10	n.a.
3. Rural unemployment and underemployment: proportion of total (percent)	35	15	60	n.a.
4. Rural population below poverty line: proportion of total (percent), 1980s	35	10–12	50–60	n.a.
5. Employment pattern: Proportion of rural work force (percent)				
(a) Agriculture	75	70	70	n.a.
(b) Nonfarm	25	30	30	n.a.
C. GNP per capita (US$, 1989)	340	360	180	320
Annual growth rate of GNP per capita: 1965–89 (percent)	1.8	2.0	0.4	2.9 (1981–90)

Source: Singh (1990); World Bank (1991); Vaidynathan (1994); Visaria and Visaria (1994).

communications, and power—in rural areas. As it is, the rural-urban continuum is already evolving: for example, in India, nonfarm employment is growing at a faster rate in towns with a population between 20,000 to 50,000 than in the urban areas (India, National Commission on Urbanization 1988; UNIDO 1995).

There is no alternative to the promotion of highly labor-intensive commerce and industry if the related problems of underemployment and poverty are to be tackled effectively.

Such nonfarm rural development could provide employment opportunities in rural or semi-urban areas at much lower capital and social costs than similar employment development in large cities or metropolitan areas. At the same time, it would prevent migration from rural to urban areas, thus saving on costs of urban infrastructure as well as the individual costs, both social and economic, of migration (Bhatt 1960, 1980; Singh 1990).

Such a rural-based development process, however, would require the institutional and organizational mechanisms that could link rural industry and commerce to urban-metropolitan and export markets. The relational contracting system is one such coordinating mechanism, as the East Asian experiences show, and it is quite relevant to the South Asian countries. Even the Indian cases, presented in the next section, illustrate the significance and effectiveness of relational contracting and other such models in ensuring a high rate of growth in the nonfarm sector in the South Asian countries.

Appropriate systems have not yet been able to develop adequately because of the government's institutional and policy framework, which tended to support large-scale industrial enterprises. Licensing policies—industrial, import, and export—and the financial system have been more geared toward the development of capital-intensive, large-scale enterprises than to labor-intensive, small-scale enterprises. Further, the policy of reserving selected areas for small enterprises in India became counterproductive. The small enterprises had no incentive to improve their technology by growing in size, and because large, urban-industrial enterprises could not enter these areas, they had no incentive to forge links with small enterprises through subcontracting mechanisms (UNIDO 1995).

With deregulation and liberalization measures initiated since 1990 and the thrust toward rural, nonfarm development, the policy framework in South Asia is now more favorable to the evolution of linkages between rural commerce and industry and urban commerce and industry. In the changed context, the relational contracting system or its variants may evolve, provided the constraints on infrastructure (roads, transport and communication, and power), technical and vocational education, and technological and marketing information are removed.

Cases of Rural Industrialization in India

Organizational and Technological Innovations in Marketing Milk

The tradition of livestock rearing and dairying in the South Asian countries is centuries old, and one-fourth of the world's cattle reside in the area. (For source materials for this case study, see Thakur 1978; Jul 1979; Paul 1982; and Singh 1990.) Of the gross value of agricultural production, 15 percent in India and 25 percent in Pakistan is accounted for by this activity (Singh 1990). This is a household enterprise, managed by village women as their side occupation.

These Indian household enterprises faced several constraints until the early 1950s. First, there was the marketing constraint. Although metropolitan and city demand for milk had

been increasing at more than 6 percent annually, the demand for milk has a high income elasticity. Milk, a perishable commodity, could not be transported over long distances because the transport technology was inadequate. Private merchants purchased milk only in volumes they could sell in nearby towns or cities, and they did not provide stable and remunerative prices. Thus, milk producers had no incentive to increase the supply of milk by adopting innovative processes such as artificial insemination of cattle. In addition, veterinary care, extension, fodder, and other essential inputs needed to improve milk production were unavailable or inadequate in most villages. These marketing and production constraints limited the supply of milk, even when the urban-metropolitan demand was increasing and milk prices were rising.

An attempt was made by the state (provincial) governments to meet the urban demand for milk by setting up modern dairy plants in metropolitan centers, close to consumers rather than close to rural areas, where milk was produced. These dairies promoted the export of cattle and cattle owners from rural areas to cities rather than the export of milk. The cattle colonies proved very costly, partly because of the high transport costs of cattle and feed and the managerial monitoring costs of cattle colonies. In addition, these cattle colonies could not supply adequate milk to the modern dairy plants, which were operating much below their capacities and at a loss. This experiment in vertical integration proved very costly.

The milk producers in Kaira District of Gujarat State in India developed a different approach. At the suggestion of their highly respected political-social leader, they created a cooperative structure for milk marketing in 1946. The Kaira Cooperative Union consists of a two-tier system—the District Cooperative Milk Producers' Union (milk union) and the Village Cooperative Milk Producers' Societies (milk societies). The village-level cooperative consists of rural members, each of whom buys a share in the society and also pays a membership fee. All members agree to sell their surplus milk to the society. The members elect a managing committee, which elects its own chairman. The society employs three to six persons for the day-to-day business of measuring and testing the milk and making payments to the milk producers. The milk is collected twice a day, morning and evening. The milk producers are paid in cash for the morning delivery in the evening, and for the evening delivery the next morning. The price depends on the fat content of the milk and is kept stable in real terms, while the society agrees to buy whatever volume of milk the sellers want to sell. Thus the marketing constraint is removed.

The district union, formed by the village societies, collects the milk from the village societies and transports it to the union, which has its headquarters in a district (like a county in the United States) center (the town of Anand). There are currently more than 850 village societies, and each society has 300–400 members. At the union, milk is pasteurized and then sold as liquid milk. The remaining milk is converted into milk products at the plants of the union (established in 1955 and expanded in 1958 and 1960).

Milk production has increased, but not only because of the removal of the market constraint, although this provided an incentive for farmers to increase milk production. The capacity of milk producers to expand production has also been increased through the

introduction of technical inputs by the district union to the members of the village societies, including balanced cattle feed concentrates, fodder seed, artificial insemination facilities, veterinary services, medicine, and the like as a part of their milk production enhancement and milch animal improvement programs. As a result of these activities and the provision of an assured daily income from the sale of milk, the milk cooperatives have increased the employment intensity of women and increased their incomes. Landless labor and small farmers account for more than 50 percent of the union's milk supply, and landless labor now derives 70 percent of its annual income from milk sales, while small farmers derive 30 percent. It has been estimated that one cross-bred cow does more to raise the standard of living in a landless household than giving the household two to four acres of irrigated land in most parts of India (Singh 1990).

The technological development that made this possible involves the transport sector and the adoption of modern dairy technology under the leadership of a dedicated and able dairy engineer. Expansion of the railway system and the introduction of long-distance hauling using refrigerated rail cars made it easier to transport milk to cities located as far as 300 miles from the district town. Milk powder production and chilling and feeder-balancing plants for milk made it easier to collect milk from rural areas and to store and transport it to the cities. Thus, a capital-intensive technology to process and market milk has been successfully combined with a relatively simple labor-intensive production technology traditionally used by rural women.

The union was very careful in selecting the chief executive of the dairy at Anand. It selected V. Kurien, a young man who had returned from the United States after receiving a degree in dairy engineering. He supplied the requisite managerial and technological expertise, without which the experiment would not have succeeded. The union managing committee had the good business sense to give him complete operational autonomy and to allow him to build his own team of executives and experts.

The cooperative structure became feasible in Kaira because of two traits of the farmers: they have always been self-reliant and possess entrepreneurial traits. These qualities made them pioneers in the adoption of high-yielding seed and fertilizer technology. The farmers are also part of a community, which has strong cultural community links because the farmers belong to the same caste and have a highly evolved code of cooperative behavior, based on mutual trust and confidence (Pocok 1972). Their reputation in the community depends on how well they keep their word and how honest and truthful they are, not only in business but also in social dealings.

This contracting pattern has been successfully replicated in the Karnatak State of India (Alderman 1987). Since 1970, attempts have been made to extend the Amul pattern in other districts of India. So far, 267 districts have been brought into the system, but it appears that, with the exception of Gujarat and Karnatak States, the experiment is facing critical shortages of fodder, veterinary and breeding services, and refrigerated transport facilities. Unlike the pattern seen in Anand, the cooperative infrastructure is not evolving through the entrepreneurial spirit of the farmers, but as a result of the efforts of the National Dairy Development Corporation (NDDC), established in 1965 with the active assis-

tance of the top management of AMUL (UNIDO 1995). The net benefits of this NDDC experiment, Operation Flood, have not yet been objectively evaluated.

Garment Industry in a Small Town

Tiruppur, a small town 50 kilometers due east of Coimbatore (district town in Tamil Nadu State), is a hive of textile-related industrial activity (for source materials for this case study, see Cawthorne 1995). The town lies in the middle of the cotton belt and, as a result, ginning, spinning, and weaving mills are highly concentrated in this area. This local resource base has facilitated the development of the garment industry, which produces cotton knitted cloth and garments. It is one of the three main centers of this industry in India; the other two are Calcutta (in West Bengal State) and Ludhiana (in Punjab State).

The industry currently has more than 1,500 small enterprises. More than 100 of the enterprises are large (each employing 50–100 workers), 151 are medium-size (each employing 20–49 workers), and the remainder are small workshops. Of the small workshops, some are family-operated enterprises (relying solely on family labor). The industry has grown very rapidly since 1960 to meet the growing demand for garments in the other states of India and to accommodate the growth in exports after 1975. In 1960 there were only 100 enterprises with total sales of about $3 million and total employment of 3,000 workers. There were few exports. By 1985 the number of enterprises was 1,500, with total sales of $80–90 million and exports of about $30 million; employment exceeded 40,000 workers. Sales have now grown to $1.8 billion, of which exports supply $600 million. The share of this town in total all-India output and exports exceeds 40 percent.

The industry is highly segmented both in markets and in the kind of garments produced. The small workshops use a very coarse knitted fabric and produce simple garments such as underpants and undershirts, largely for the local market. The medium-size enterprises cater to the all-India market and produce a variety of garments with sophisticated designs. The large enterprises have contracts from abroad and produce garments to the specifications (design, fabric, dyeing, and finishing) of foreign buyers; the quality of garments for export is quite sophisticated. The profit margins for exports are much higher than for products in the local or all-India markets.

All entrepreneurs are of rural origin, and some are from villages near the town. Those who own medium-size and large enterprises come from trading backgrounds. Owners of small enterprises belong to the class of landless farm labor. They originally migrated as workers for medium-size and large enterprises and then became entrepreneurs. The entrepreneurs of medium-size and large enterprises are educated, and quite a number of them have high school and college degrees, while the owners of small shops generally have only rudimentary education in primary schools.

The large enterprises receive orders from exporters and agents of foreign multinational firms, the medium-size firms from agents of wholesalers from other states of India, and the small shops from local wholesalers. The large enterprises contract out work to medium-size and small workshops that specialize in one of the production processes (all of

them contract out work for specific processes). Because the processes are distinct and separable, this extreme specialization has been possible. The processes involved are twisting and sizing of yarn, cloth making (knitting), dyeing, bleaching and finishing, and garment making.

Large enterprises concentrate on receiving export orders and contracting out work for each process to medium-size and small enterprises; the remuneration is on a piece-rate basis. They merely supply the designs; the necessary materials are bought by the subcontractors. The large enterprises also have another form of subcontracting. Some of them own, but do not manage, several workshops, each specializing in a selected process. They engage a subcontractor, who is responsible for doing what is called the "job" work (work related to a process). The subcontractors are provided with the machines and raw materials necessary for a particular "job." These subcontractors are often individuals who have worked for the large entrepreneurs, and they were appointed as subcontractors because of the large entrepreneurs' familiarity with their expertise, skills, and management ability. The subcontractors hire labor as required and are responsible for managing it. Eventually some of these subcontractors start their own small workshops.

Contracting out is common to all enterprises. It enables even a small enterprise to engage in the production of garments with little capital and a small number of workers. Because of the concentration of interconnected, extremely specialized enterprises in a sort of industrial cluster, there are *economies of agglomeration*. Enterprises are able to obtain information on designs and processes from each other, through formal and informal sharing of information and close contacts.

There is intense competition in the industry, and contracts can easily be made afresh; partnership relations can be changed easily both by the principal and the agents. Since familiarity and trust arise out of repeated transactions, however, the contractual relationships are generally long term and durable. Changing such a relationship involves transaction costs and risks, unless the terms are not met. One subcontractor works for several principals, depending on his capacity and skills, but his relationship with all of them is enduring.

The workers include men and women, as well as children, and whole families are sometimes also employed by large enterprises. The wages and other emoluments are lower than in large-scale factories, because small enterprises are exempt from all labor laws, including minimum wages. The hours of work are longer than in factory enterprises.

Government help is of two kinds. In the field of exports, the Apparel Export Promotion Council conducts market research studies, identifies export potential, and explores new markets for the further development of exports. It sponsors trade delegations, study teams, and sales tours to markets abroad and it offers subsidies of approximately 50 percent, depending on the size of their units. The second form of assistance is credit on preferential terms from the nationalized banks, which also assist in the dissemination of market information by arranging meetings and seminars. Active associations in Tiruppur—the South Indian Hosiery Manufacturers' Association and South Indian Textile Research Association—also provide technical and market information.

Because of relational contracting and rural-based industry development, this sector has proved to be superior in profitability to some vertically integrated, city-based enterprises. Some large enterprises in metropolitan centers such as Calcutta could not compete with small enterprises and were operating at a loss by 1960. All three centers—Calcutta, Ludhiana, and Tiruppur—currently have similar production and marketing patterns; Ludhiana, a small town, is more like Tiruppur than Calcutta.

Modern Subcontracting in the Bicycle and Tractor Industries in Punjab

BICYCLE INDUSTRY (for source material for this case study, see Singh 1994). By the mid-1950s, there were seventeen bicycle producers, which were dominated by metropolitan-based, large-scale units with foreign collaboration. Set up by experienced businessmen in Madras, Calcutta, and Bombay, these large companies had established themselves in the growing market for bicycles in India. Within a decade, however, the up-country manufacturers (such as Hero, Atlas, and Aron), located in small towns in rural areas, and set up with little funding and indigenous technology, emerged as the dominant actors in the Indian market. This was when the metropolitan units started incurring losses brought about by the organizational problems created by the integrated nature of their operations: high wage costs, strikes, other labor problems, and lack of subcontracting. While these older units gradually lost their position in the market, the three up-country units claimed more than 80 percent of the market by 1991. The share of Hero Cycles was 46 percent.

Hero Cycles found a place in the *Guiness Book of World Records* with their annual production of 2 million cycles. This enterprise was started by the Munjal family, which had migrated from Pakistan in the wake of the partition of old India. The family started with a small bicycle repair shop, then moved into components manufacturing, and converted this into a bicycle manufacturing unit by 1951. The firm had started manufacturing complete cycles by 1956. The family had previous experience in the bicycle industry when they lived in the former West Punjab (now in Pakistan). It belonged to the Khatri Caste, which is traditionally associated with business success. A local legend would have us believe that even if a Khatri puts ashes on his head (that is, becomes a holy man), he will still make a profit.

Hero is a family business, managed by the members of the extended family, and there is no separation from ownership and control, as happens in corporate enterprises. Further, the technology used is highly labor-intensive and based on indigenous machinery called "Punjab-type machines." These are assembled locally in a process learned through "reverse engineering" of foreign machines, which makes replacement of machines easier and less costly than it is for metropolitan-based firms, which relied on the capital-intensive technology of imported machines.

Further, Hero relies for 80 percent of its parts on a large number of subcontractors (more than 100). The enterprise itself has helped the establishment of small family workshops, which are the parts suppliers to the main enterprise. It helps these units in the acquisition of scarce raw materials and the selection of machinery and provides them with technical

guidance. It also encourages its own employees to set up their own bicycle component manufacturing units and provides them with funds, market support, and other facilities.

This durable and long-term contracting relationship with the parts manufacturers, who use highly labor-intensive technology as well as family labor to the extent possible, has improved the cost-effectiveness of Hero Cycles. The just-in-time inventory system, made famous by Japanese automobile companies, has been applied very effectively: suppliers are clustered around the main firm and orders can be placed and received in a matter of hours. The three-tiered system of large, small, and very small units in the bicycle industry ensures that waste is minimal; even the scrap material is used so efficiently that it reminds us of the waste recycling industry in Japan.

The subcontractors are of rural origin and belong to farming families. Their educational levels are not very high—most have schooling up to the primary or secondary level, although a few may hold a high school degree. But this class has mechanical talents. Some of the members of the families have military experience, and some entrepreneurs are themselves retired military personnel or rural artisans. Further, the Punjabees like to operate their own family enterprises rather than work as factory workers in a large enterprise. This is the reason for the large number of small, family-operated enterprises in Punjab.

The durability of the contractual relationship is based on two factors. First, most of the subcontractors have been actively assisted by Hero Cycles as a part of its strategy, and thus have a strong sense of loyalty to the main enterprise. Second, Punjabees have a strong sense of ethical conduct and pride in achieving "excellence" in performance. Thus, the principal and the subcontractors form a community, and the community spirit is enhanced by the family, social, and cultural ties that bind them; such ties are stronger in Punjab than elsewhere.

The government policy framework has been helpful. For refugees, the government provided factory sites on a deferred-payment basis at a very low rate of interest; loans to build workshops and to purchase machinery at low rates of interest; and a special allotment of quotas for materials in short supply, such as steel and iron. Moreover, the Punjab government was among the first to set up a state financial corporation with the objective of providing medium- and long-term financial assistance to industrial concerns. Government also exempted all small-scale units from paying excise duty on production and from all labor laws.

TRACTOR INDUSTRY (this section is based on Bhatt 1978). The domestic production of tractors started in India in 1963–64 to meet the increasing demand from farmers, who had adopted the new hybrid seeds/fertilizer technology. Two firms were set up, one in collaboration with Massey-Ferguson of the United Kingdom and the other with Eicher of the Federal Republic of Germany. The capacity of the two firms, however, was not adequate to meet the growing demand. By 1972, nine other companies were started, including Swaraj Tractor. Swaraj Tractor started with an annual capacity of 5,000 tractors in 1974 and is currently manufacturing 55,000 tractors each year. It is now the third-largest manufacturer of tractors and is the only one to cultivate export markets.

While all other units were based on collaboration with foreign firms and on imported inputs, Swaraj was the only firm based on Indian technological research and indigenous inputs. Its first product was a 20-horsepower tractor, which was suited to the relatively small holdings in Punjab—68 percent of holdings in Punjab were smaller than 9 hectares—and accounted for 20 percent of the stock of tractors in 1971. Swaraj was the only firm that provided a distribution network and after-sales service, and it was the only firm that developed capability in the fields of R&D, tool design, and industrial engineering and tool making. These capabilities made it possible for Swaraj to introduce a 35-horsepower tractor as well as a small, economical tractor by 1980.

The factors that made Swaraj Tractor an internationally competitive, viable enterprise also made it much less capital-intensive than the other tractor manufacturers in India. Its R&D capability has been used to change the design of components to cut down capital investments and to introduce innovations to conserve capital. The major reason, however, has been its departure from the vertical integration system and the adoption of the relational-contracting system. It received 80 percent of its parts/components from subcontractors; that is, 780 kinds of components. To achieve this end, it assisted more than 100 small workshops around its location in Mohali, a small town near Chandigarh (the capital of Punjab), over a period of three years. These workshops were given technical assistance, including designs of components and technical training, and the expectation of a long-term relationship, provided they met quality standards (which most of them have). Seventy subcontractors are located within a radius of 10 kilometers from Swaraj, and the rest are within 20 kilometers. Obtaining parts in time has thus not been a problem.

As with the bicycle industry in Punjab, all these subcontractors are of rural origin and have links with farm families. These are family workshops. The characteristics of the Punjab entrepreneurs outlined in the bicycle case also apply here. Swaraj Tractor also established a network of dealers in rural areas, providing them with technical training and information. As a result, it has promoted a large number of rural entrepreneurs in the commerce sector. As with the subcontractors, Swaraj also has a long-term and durable relationship with dealers.

The government played a role in designing the 20-horsepower tractor—the Central Mechanical Engineering Research Institute did the research required. Because the tractor design was new, private entrepreneurs were not willing to undertake its production. The Punjab government, through its Punjab State Industrial Development Corporation, became the promoter, with financial assistance from the national development bank, the Industrial Development Bank of India.

Comparative Evaluation of the East Asian and Indian Experiences

The Indian experiences are comparable to the East Asian experiences, and it is interesting to note similarities and differences between the two.

The Rice and Milk-Marketing Cases

The rice-marketing case (see Chapter 2 by Kawagoe) of Japan from 1868 to 1930 and the Indian milk-marketing case have several common elements. In both cases, the development of transport and communications brought about the integration of local markets into a large, national market and created opportunities for rural entrepreneurs to emerge. The institutional innovation of rice-grading warehouses (*beiken sôko*) in Japan made it possible for a sophisticated market to evolve; it performed the function of inspection/grading, repackaging of rice into standardized qualities, and storage. These warehouses were started not only by private companies, but also by farmer cooperatives. A similar function was performed in India by the district union (a cooperative enterprise): it collected milk, graded it by fat content, and stored and processed it for marketing in a modern dairy plant. This institutional mechanism was created by rural entrepreneurs through the formation of a cooperative structure for milk marketing. Private merchants performed the marketing function in Japan, while a cooperative structure formed by small milk producers looked after marketing in India.

In the milk-marketing case, relational contracting was built into the cooperative marketing structure itself. The principal guaranteed the purchase of whatever milk the producers were willing to sell. There has also been interlinking of contracts: the principal supplies some inputs, technical assistance, and some other services. The long-term relationship between the principal and agents is based on strong community links. Thus, this case has all the characteristics of the relational contracting model, discussed earlier.

In Japan, relational contracting must have evolved among the hierarchy of merchants—rice collectors/retail traders, urban wholesalers, resalers, and retailers—although Kawagoe does not explicitly mention such evolution. There must have been a long-term relationship among these merchants; one can infer such a relationship on the basis of such trading systems elsewhere (Hicks 1969). The innovation of rice bills/drafts is similar to the bill of exchange elsewhere, and such a credit arrangement is not possible without a code of conduct among the merchants. Without such a code of conduct, credit transactions cannot take place, for the transaction is based on mutual trust. Thus, as in the Indian case, the Japanese case has all the characteristics of the relational contracting model: a long-term relationship based on mutual trust and advance-order contracting interlinked with credit transactions.

In both the cases, there is product specification by the principal: in the milk case, fat content of the milk, and in the rice case, the quality of rice. In the language of Chapter 10, the classification system of Kikuchi and Ohno, both the rice and the milk case are of the advance-order contracting I form.

The Garment Industry

The garment industry cases of Thailand (Chapter 6 by Ohno and Jirapatpimol) and the Philippines (Chapter 5 by Kikuchi) are also similar to the Indian case in some respects.

There is a stable, long-term relationship between the principal and the agents based on close contacts in both the Thai and the Indian cases. In Thailand, the rural entrepreneurs were known to the principal garment factories, and in India, the subcontractors lived in close proximity to the principals. In the Philippines, the economic and social bonds do not seem to be as strong as in Thailand or India because of the differences is social status arising from education and economic class, and the long-term relationships lack the stability observed in the Thai and Indian cases. In all three cases there is interlinking of contracts—a contract for guaranteed purchase linked with the provision of product specification. In Thailand and the Philippines, there is also provision of materials. In India, materials are supplied to the subcontractors for all processes except the twisting and sizing of yarn. Thus, in Thailand and the Philippines, the putting-out contract I has been used, while in India, advance-order contracting I has been used in one process and a putting-out contract I has been utilized in all the other processes. The Thai and Indian cases have all the characteristics of the relational contracting model, while in the Philippines case, mutual trust is not as strong as in India or Thailand.

The division of labor or specialization among subcontractors seems to be greater in the Indian case than in the Thai or Philippines cases. In Thailand and the Philippines, the subcontractors largely specialized in sewing operations. In the Philippines, for example, although Kikuchi mentions that some processes—such as cutting cloth, embroidery/smocking/appliqué, sewing, and special processes including beading, injection molding (for haners), and knitting—are done by specialized contractors, the majority of his sample subcontractors (149 out of 189) seem to specialize only in sewing, as in Thailand. In contrast, in India the division of labor and specialization appear to be much greater than in Thailand or the Philippines. The processes include twisting and sizing of yarn, knitting, dyeing, bleaching and finishing, and garment making; each subcontractor specializes in one of the distinct and separable processes. This has been possible because both the principals and subcontractors are located in one town, while in Thailand and the Philippines, the subcontractors are largely located in villages and small towns and the principals are located in metropolitan centers. In the Philippines, Laguna I and Laguna IV are in regions adjacent to Metro Manila, but there is no close proximity between the principals and the subcontractors as in India.

The major difference between India and the other two cases is that in India, all principals and subcontractors are located in what was earlier described as an industrial cluster. In this respect, the Indian case resembles not only the relational contracting model but also the Italian District Model. In addition to the *economies associated with the relational contracting model*, the Indian case has the *economies of agglomeration*, discussed earlier. Further, *insider contracting* is also prevalent in the Indian case.

The subcontractors in all three cases are of rural origin. In the Thai and Philippines cases, however, the subcontractors and their employees are largely women, while in the Indian case, the subcontractors are men, although some of their employees are women and children. In Thailand, the subcontractors had previous experience as line supervisors in large, urban-based garment factories, while in the Philippines they do not seem to have

such experience and have other occupations as well. In India, as in Thailand, the owners of small workshops had previous experience as employees in large workshops, while the owners of medium-size workshops came from trading backgrounds, as is the case with some subcontractors in the Philippines.

A lack of adequate previous training and strong personal ties between the principals and the subcontractors (because exporter-contractors in the Philippines are large, incorporated firms, located in big cities) seems to be responsible for the need for close monitoring of subcontractors by principals. In India and Thailand, subcontractors have close personal ties with the principals that make complicated monitoring unnecessary. The education levels of subcontractors in India and the Philippines are higher than those of their counterparts in Thailand.

In all three cases, the market is segmented into local, national, and export sectors. The rapid growth of the garment industry in all three countries since the 1970s and 1980s has largely been the product of the opportunities available in the export sector. Government assistance in all three cases has been generally similar: tax incentives, provision of market information, provision of infrastructure, and so forth. In all these cases, the rural labor market is free from strict government regulations, and government policies encourage the growth of small enterprises.

The Toyota and Tractor Cases

With regard to forming close personal ties with suppliers and providing them with managerial and technical assistance to improve their products, the Toyota case (Chapter 4 by Wada) is somewhat similar to the Swaraj Tractor case in India. In the early stages, however, up to almost 1950, Toyota did not provide adequate managerial and technical assistance to its suppliers. This was the "*keiretsu* diagnosis," promoted by the Small and Medium Enterprises Agency, which taught Toyota a lesson in how to advise, monitor, and grade its suppliers, as mentioned by Wada. Thus, it was only in the early 1950s that Toyota shaped an active policy of upgrading the managerial and technical competence of its suppliers, although the earlier close personal ties and the inculcation of strong community bonds certainly helped this process. This new, active strategy made it possible for Toyota to market its first completely domestically produced car, the Crown, in 1955 and to introduce into its plants what is called the "supermarket system"—a forerunner, as Wada mentions, of the later "just-in-time method."

In the tractor case, the tractor was of indigenous design, as was Toyota's Crown. Even before producing tractors, however, Swaraj had decided to rely on subcontractors for 80 percent of its parts by establishing a relational contracting system. Over a period of three years, it actively assisted more than 100 small workshops around its location in the small town of Mohali in producing tractor parts/components by giving technical assistance, including designs of components, and technical training. These activities to foster close personal ties, and the extra-economic ties of sociocultural bonds, created a strong partnership relationship between Swaraj and its suppliers.

In the cases of both Toyota and Swaraj, all subcontractors were of rural origin and had links with farm families. Government policies were quite helpful to both.

The bicycle case is similar to the Swaraj case and has certain common elements with the Toyota case. In the bicycle case, however, the entrepreneur has been a migrant, initially started a repair shop, and later became a bicycle manufacturer. He actively supported all his subcontractors and had close economic as well as sociocultural ties with them. This case shows how repair experience can generate skills, initially for making parts and later for the manufacture of the final product. *Repair experience, like trading, can be a seed-bed for entrepreneurship.* Thus, all three cases conform to the relational contracting model: there are long-term relationships based on economic as well as social ties and interlinking of contracts (advance-order contracting linked with technical guidance) that cements long-term relationships, as do the community bonds. Some product specifications are given by the principal, and all three cases represent advance-order contracting I. Because the parts suppliers and the principal are located not very far from one another, there are also *economies of agglomeration,* or of an industrial cluster, discussed earlier. All three, although modern enterprises, are located in small towns in rural areas, which allowed entrepreneurs of rural origin to emerge.

Conclusions

The East Asian and Indian case studies suggest the *feasibility* of rural industrial and commercial development through the coordinating mechanism of the relational contracting system that links rural development with the urban industrial and commercial sector. Case studies can only be suggestive or illustrative, they cannot prove or disprove any hypothesis. Nevertheless, it is essential to inquire into the social and economic environment that can lead to such rural-urban linkages.

As Schumpeter (1975) has emphasized, there must be opportunities for entrepreneurs to emerge. In rural areas, such opportunities depend on the growth of the agricultural sector. As Kaldor (1967) has noted:

> The growth of the secondary and tertiary sectors is dependent on the growth of the 'agricultural surplus'; that is the excess of food production over the food consumption of the food producers themselves. This aspect of development was first emphasized by Adam Smith . . . the emergence of a progressive agriculture was the key to the progress of industrialization in Europe. It is no accident that in England, as elsewhere in Europe, the so-called 'agricultural revolution' historically preceded the "industrial revolution." . . . Land reform, with the consequent agricultural revolution, has also played a vital role in the development of Japan after the Meiji Restoration.

For rural industrialization, however, one additional condition appears to be essential, and that relates to the agrarian economic and social structure. In countries where large landlords dominate the agrarian sector, rural nonfarm employment does not seem to in-

crease substantially. In England, the enclosure movement led to farms dominated by large landlords, and peasants were reduced to the status of wage earners or migrated to the urban areas. Rural industrialization and the emergence of rural entrepreneurs are possible only when farm size is relatively small and there is peasant farming. This condition prevailed in countries such as Italy, France, and Japan.

Rapid agricultural growth under conditions of small-scale peasant agriculture creates opportunities for the emergence of rural entrepreneurs in commerce, industry, and services because of the backward and forward linkages of agriculture with industry and commerce. Backward linkages comprise trade and industry relating to agricultural inputs such as fertilizer, agricultural implements, and high-quality seeds. Forward linkages relate to marketing and processing of agricultural produce. With rising incomes, opportunities arise in the manufacture and trade of basic consumption goods such as processed food, clothing, shoes, milk, and milk products. Service sector opportunities relate to transport, repairs of agricultural implements, and consumer durables such as radios, bicycles, watches, and the like.

With large-scale agriculture, these linkages promote urban industrialization and commerce. Landlords, with their urban-metropolitan connections, generally prefer to satisfy their demand for products and services by importing them from urban areas, or even from abroad. Small-scale peasant farming promotes such linkages in the rural areas, and as the market expands with rising rural incomes, rural entrepreneurs tend to export their products to urban areas, or even abroad.

Rural entrepreneurs generally emerge from among the farmers, traders, artisans, and landless labor. For farmers, the inducement to start rural enterprises is to provide enterprises and work for the members of growing families; all of them cannot be absorbed in agriculture because of the scarcity of land. Relatively rich farmers branch out, through family members, into small rural enterprises, largely related to agriculture, such as trading in agricultural inputs and products, manufacture of inputs for agriculture, and consumption goods such as processed food and clothing for expanding rural and urban markets. There are retail traders in rural areas, and once rural production increases, their market expands and some of them form links with urban areas, while others tend to start small industrial enterprises. The traditional skills of the artisans prompt them to expand their production, first for the rural market, and later for the urban markets. Landless labor may initially find employment in all kinds of rural enterprises and, with improved skills and experience, may also start other enterprises.

Because of capital constraints, the enterprises would be small, and with expanding markets, there would be increasing specialization and division of labor, as Adam Smith emphasized long ago (Smith 1970). Because of family connections and strong community links, these opportunities would be seized by establishing close linkages among the specialized small enterprises. In time, with expanding markets, such linkages would develop with urban export markets.

It is worth illustrating such evolution. In the Punjab State in India, food grain output increased by 9.5 percent annually during 1960–70, and 5.15 percent annually during 1970–

79. Punjab has small farms. During this period, nonfarm employment rose significantly. The rural entrepreneurs emerged from among the farmers as well as from among the artisans. A large number of small enterprises emerged in products such as farm tools and equipment, (threshers, harrows, and tillers), woolen garments, bicycle and bicycle parts, sewing machine parts, tractors, and machine tools (Pandit 1978; Little, Mazumdar, and Page 1987; Taub and Taub 1989; and Singh 1990). Because of linkages among families and strong community bonds, relational contracting evolved in sectors such as garments, farm equipment, bicycles, machine tools, and tractors. These industries evolved in clusters in small towns; thus they have, in addition to *economies of relational contracting, economies of agglomeration* as well. Their products are also exported to the urban areas and foreign countries.

Similar development has taken place in the Kaira District of the Gujarat State in India. The rate of agricultural growth is similar to that of the Punjab State; like Punjab, there is small-scale peasant farming and strong community traditions (Pocok 1972). Out of fifty-nine small enterprises studied by Rutten (1992), thirty-nine were started by farmers; the rest were set up by artisans and traders. But all of them belonged to the rural area. In both the regions, Punjab as well as Kaira District, the population below the poverty line is much less than the all-India average; in Punjab, it is currently less than 5 percent, as against the all-India average of 35 percent.

Taiwan represents a similar case. It has the advantages of peasant farming; rapid agricultural development, and strong family, clan, and community bonds (Ho 1979).

Historical and current experiences suggest that employment generation and industrial and commercial development in rural areas are highly correlated with the rate of growth of agricultural output. This evidence, however, comes mainly from areas that have experienced high agricultural growth rates over long periods, such as the Indian and Pakistan Punjabs, Kaira District in the Gujarat State of India, Malaysia, Taiwan (China), Japan, and some European countries, including Italy and France. That such an outcome is possible is shown by Mellor and Mudahar (1974) in their simulation model. They show that if food grain output grew at 4 percent annually over more than a decade in a country with an annual population growth rate of 2.2 percent and an initial underemployment rate of 30 percent of the labor force, the share of nonfarm employment would increase from its initial level to 55 percent, and underemployment would be reduced to 3 percent of the work force over a period of twelve years. The backward and forward linkages of agriculture with other sectors would bring about this result.

Of course, no development, let alone rural development, can take place without adequate infrastructural development (roads, transport and communication, power, and the like) and institutional infrastructure in education, technological training and assistance, and the provision of information regarding existing and potential markets.

Since the developing countries have a comparative advantage in labor-intensive industries, they can seize this opportunity only if the trade policy is not only oriented toward exports, but also actively promotes them (World Bank 1993). These are some of the industries where rural-urban linkages are feasible with a coordinating mechanism such as the relational contracting system or its variants.

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